

ALSO IN OUR NEWS SECTION

- Mad cow disease spurs interest in using RFID tags to track animals in the U.S. PAGE 6
- Security breaches highlight the need to encrypt stored data. PAGE 10

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JANUARY 5, 2004 • VOL. 39 • NO. 1 • 75 CENTS

OUR ANNUAL PREMIER 100 ISSUE



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IT LEADERS 2004

RISKY BUSINESS

Cunning rivals, technology traps and stingy budgets are the daily challenges that today's IT executives face. But Computerworld's 2004 Premier 100 IT Leaders use their wits and fortitude to keep their staffs and companies headed in the right direction. **STORIES BEGIN ON PAGE 15.**

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100 PREMIER IT LEADERS 2004

RISKY BUSINESS

The IT leader's job gets tougher by the day. Read how this year's Premier 100 have learned to overcome the challenges.

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30 **COMPETITION:** The key to building a competitive edge is to have processes for identifying emerging business and customer needs, and then controlling risk by leveraging the strengths of existing systems.

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DANIEL MORREALE



MADGE M. MEYER



SANJIV ANAND



PATRICIA COFFEY



KEITH MORROW

The Rebirth of Creativity

Creativity in these IT departments is being sparked anew among IT leaders by their very best resource — their staffs. Here are three ways they're driving innovation.

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What Makes a Leader

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62 **OPINION:** In the face of risk, you have to stay connected to the realities of IT and your business — and stay sane, says columnist Frank Hayes.

Agriculture Secretary Backs National Livestock ID System

RFID plan gets boost following mad cow discovery, but funding is uncertain

BY BOB BREWIN

AGRICULTURE Secretary Ann Veneman last week called for the creation of an automated system for identifying and tracking farm animals to improve the government's ability to respond to emergencies, such as the case of mad cow disease discovered in Washington state.

A group of livestock producers and processors, with help from the U.S. Department of Agriculture, has developed a plan that calls for the use of radio frequency identification tags to track cows, pigs, sheep and other animals. The proposal, known as the U.S. Animal Identification Plan (USAIP), also includes a central database that would store RFID-generated information about the 200 million head of livestock in the U.S.

Such a system could help the USDA quickly trace diseased animals to their birth herds, a key to locating other animals that might be infected. It took the USDA four days to pinpoint the birth herd of the Holstein cow that had been infected with bovine spongiform encephalopathy (BSE), the formal name for mad cow disease. Automated systems, which are already in place in several other major beef-exporting nations, can do such traces in a matter of seconds.

'The \$600 Million Question'

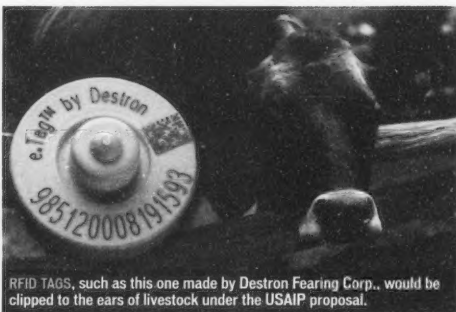
However, it's still unclear how an initiative like the USAIP would be paid for. Robert Fourdraine, chief operating officer at the Wisconsin Livestock Identification Consortium and IT director for the RFID proposal, said funding "is the \$600 million question." That's the amount estimated to be needed to deploy a

nationwide tracking system.

At a press briefing, Veneman didn't say how the USDA plans to fund the system it envisions. She named Scott Charbo, the agency's CIO, to lead the development effort. Charbo was on vacation and unavailable for comment last week, according to a USDA spokeswoman.

On Nov. 20, U.S. Rep. Diana DeGette (D-Colo.) introduced a bill calling for improvements in the USDA's ability to trace all livestock and poultry in the U.S. But a DeGette spokesman said he couldn't address funding now, either. DeGette plans to look at the funding issue "early in the new year," he added.

Rod Nilsestuen, secretary of the Wisconsin Department of Agriculture's Trade and Con-



RFID TAGS, such as this one made by Destron Fearing Corp., would be clipped to the ears of livestock under the USAIP proposal.

sumer Protection division, said he thinks the USDA should help fund the national tracking system because of the economic hit that the nation's beef industry has taken following the discovery of BSE in Washington.

The USAIP calls for a staged technology rollout, starting with a nationwide repository of farms and meat

processors that could be in place by July. The livestock database, which would assign unique identifying numbers to animals based on RFID specifications developed by the International Standards Organization, is expected to be launched in July 2005 and fully rolled out 12 months later.

But some companies in the meat industry are lobbying for

the use of technologies other than RFID tags. Rex Moore, president of Maverick Ranch Natural Meats in Denver, said he favors a retinal scan system developed by Optibrand Ltd. in Fort Collins, Colo. Moore called Optibrand's technology less expensive and more fool-proof than RFID tags.

The Optibrand reader incorporates a GPS receiver, which allows users to simultaneously record the identity and location of an animal, Moore said. A retinal scan system would also eliminate the potential problem of an RFID tag falling off an animal or being removed, he added.

Swift & Co., the third-largest meatpacker in the U.S., said it also plans to use Optibrand's technology, as part of a cattle-tracking system that it's offering to suppliers. Greeley, Colo.-based Swift added that it's looking at extending the system to retailers and food service companies. **43795**

PLAYING CATCH-UP

The U.S. lags behind other beef exporters in developing an automated animal ID system.

QuickLink 43786
www.computerworld.com

Schwab Deploys Linux-based Grid Hopes to speed up app performance

BY LUCAS MEARIAN

Charles Schwab & Co. last month went live with a Linux-based grid computing system in an effort to speed up some of its compute-intensive investment management applications.

David Dibble, executive vice president of technology services at Schwab, said the grid system was jointly developed with IBM and currently connects 12 two-processor servers that are based on Intel chips and located in the discount brokerage's Phoenix data center. Later this year, San Francisco-based Schwab plans to begin rolling out the grid technology across a thousand or more low-cost servers with spare CPU capacity that could

be tapped to help boost application performance.

Dibble wouldn't disclose the cost of the project or the throughput that Schwab has achieved on an initial retirement planning application, citing the performance levels as a competitive advantage. But he said the system lets Schwab turn around end-user requests for retirement planning data in seconds instead of days.

"We wanted to open up a new realm of high-throughput computing for Schwab's business applications," Dibble said. "Things that were not thinkable just a year ago are now proving economical, and we're working at getting more of them into production."

It took 15 internal IT staffers working with a development team from IBM about a year to build the grid system, which

links IBM xSeries 330 servers running Red Hat Linux and IBM's DB2 database. Schwab is using Globus Toolkit 2.0, open-source software that supports grid computing applications. The system also includes IBM's WebSphere application server software and BEA Systems Inc.'s rival WebLogic tool, Dibble said.

Lower TCO, Too

Schwab's IT team hopes that, in addition to boosting application performance, the grid system will help lower total cost of ownership in its tech operations. Like most large brokerages, Schwab built its server infrastructure to handle twice the computing capacity needed during peak hours on an average day, Dibble said.

"There's a lot of capacity lying around on just average

days," he noted. "What grid computing does is enable us to go out and recapture unused capacity in a very efficient manner."

The retirement planning application that's running on the grid system calculates real-life portfolio scenarios based on retirement goals, risk tolerance and preferred investments. In the future, Schwab plans to add other applications designed for investment managers and to Web-enable the software for use by individual investors.

The grid system works through a "head node," a master server that breaks up data requests into smaller jobs and sends them to systems on the grid for processing, said Willy Chiu, a vice president in IBM's software group. The head node then reassembles the pieces of the transaction and presents the data to end users.

43670

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GAO Says 'Inaccuracies' in 2004 Pentagon IT Budget Total \$1.6B

Sloppy IT accounting practices blamed

BY LUCAS MEARIAN

THE FEDERAL government's General Accounting Office said in late December that sloppy accounting practices by the Department of Defense led to a \$1.6 billion discrepancy between two key IT budget reports for fiscal 2004.

The GAO said in a report that there were "material inconsistencies, inaccuracies or omissions" that tainted the reliability of the Pentagon's IT accounting practices.

The DOD's fiscal 2004 IT budget summary request and its detailed capital investment report were inconsistent, the GAO report said. The GAO said that 15 initiatives that are in the Pentagon's budget summary aren't included in its capital investment report and that "discrepancies exist between the two types of reports in the amounts requested for 73 major initiatives."

The discrepancy adds up to about \$1.6 billion, or 6% of the department's \$28 billion budget request for fiscal 2004.

According to a DOD spokesman, the reason for the difference is that the capital investment report "is an auxiliary document to the president's information technology budget. Not all IT initiatives are explained using capital investment reporting." The list of DOD IT initiatives that have an associated capital investment report is negotiated between the DOD and the Office of Management and Budget, the spokesman said.

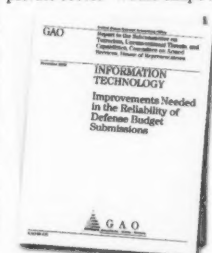
Topping the list of projects with inconsistent budget figures was the Navy/Marine Corps Intranet program, which is designed to connect as many as 310,000 Navy and Marine Corps IT users once it's in place [QuickLink 36655]. The GAO said that about 95%

of the total dollar difference between IT budget requests from the Navy — \$581 million — could be attributed to the intranet initiative. That project is expected to cost the Navy \$6.9 billion.

"That's a whopping error," said John Gantz, an analyst at IDC in Framingham, Mass. "You wouldn't expect an error bigger than 5%."

Yet Gantz said he wasn't surprised by the report, noting that the Defense Department is known for having poor accounting practices, which he attributed mainly to inadequate

management and accounting procedures. He suggested that a bill that affects the government the way the Sarbanes-Oxley Act affects the private sector "would shape it



"Material inconsistencies" plague the DOD, the GAO report says.

all up pretty quickly."

The GAO attributed the budget discrepancies to what it called "insufficient management attention" as well as "ambiguities" in the Defense Department's internal regulatory processes, including those for ensuring consistency between reports. According to the DOD spokesman, key reasons for the discrepancies include insufficient time to reconcile the data, errors, conversion of different data formats for certain projects and the fact that "not all dollars were included for particular initiatives based on OMB guidance."

The GAO report cited a \$362 million discrepancy in

Air Force budget requests and a \$55 million discrepancy in Army requests. Several other organizations within the department were responsible for another \$618 million that could not be accounted for.

The GAO recommended that the secretary of Defense establish policies, procedures and supporting systems to avoid repeating the problems it found in the department's budget request. "This is particularly important because the [DOD] spends more on IT annually than any other department or agency, accounting for about half of the roughly \$59 billion governmentwide IT budget in fiscal year 2004," the report stated. **Q 43794**

BEYOND THE DOD

NASA has some IT budget problems of its own, the GAO says:

QuickLink 43781
www.computerworld.com

Novell, SCO Fight Over Ownership of Unix Code

SCO warns users about violating copyright laws

BY ROBERT MCMILLAN AND JORIS EVERS

The SCO Group Inc. fired another shot across the bows of corporate Linux users last month, sending a letter to some Fortune 1,000 companies contending that their use of the open-source operating system violates U.S. copyright laws.

But Novell Inc., which is buying Linux vendor SUSE Linux AG [QuickLink 42677], challenged SCO's copyright claims by asserting that it owns the rights to the Unix System V source code. Novell said it has been registering copyrights for some of the same Unix versions for which SCO submitted registrations last year.

The competing ownership claims add yet another element to SCO's legal campaign against Linux vendors and

users. The London, Utah-based company is seeking license fees to cover the alleged use of its Unix technology in Linux.

Novell bought the rights to Unix System V from AT&T Corp. in 1992, but SCO says it acquired them four years later. Last May, Novell acknowledged that a 1996 contract amendment produced by SCO appeared to support the latter company's ownership claims.

But in subsequent letters to SCO that Novell released Dec. 22, Joseph LaSala Jr., Novell's

general counsel, argued that the amendment provided for a copyright transfer only under certain conditions that SCO has allegedly failed to meet.

SCO was quick to dismiss Novell's claims. "We see this as a fraudulent filing of copyright notices... and we'll take the appropriate measures as necessary with our legal team," SCO CEO Darl McBride said during a conference call held to discuss his company's most recent financial results.

The fact that both Novell and SCO were able to register as owners of the Unix copyrights isn't surprising, said David Byer, a partner in the patent and intellectual property group at Boston law firm Testa, Hurwitz & Thibault LLP. The U.S. Copyright Office doesn't examine the validity of copyright claims, Byer said. "When you fill out a copyright registration, you're essentially declaring under penalty of perjury that you are the owner," he noted.

In the Dec. 19 letter it sent to an unspecified number of large corporate users, SCO detailed a list of Linux system files that allegedly contain application binary interfaces

copied from the Unix System V code base. SCO said the use of the interfaces in Linux violates its copyrights and warned that it could take legal action.

A day earlier, SCO sent a separate letter to about 6,000 Unix licensees demanding that they certify that they're in full compliance with their agreements and aren't using any Unix code within Linux.

But Daniel Ravicher, senior counsel at the Boston-based Free Software Foundation, said it's hard for recipients of the letters to judge whether SCO's intellectual property claims are valid because SCO still hasn't provided enough information to back up the assertions. "SCO refuses to give any specifics," he said. "A reasonable person can't draw conclusions." **Q 43793**

McMillan and Evers write for the IDG News Service. Computerworld's Matt Hamblen and Todd R. Weiss contributed to this story.

MORE ONLINE

For full coverage of the SCO/Linux controversy, go to our Web site:

QuickLink a3260
www.computerworld.com

Rival Claims

We have a clear-cut set of [copyright] violations here.

DARL MCBRIDE, SCO CEO

Ownership of such rights [to Unix] instead remains with Novell.

JOSEPH LASALA JR., Novell senior vice president and general counsel



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BRIEFS

Microsoft Settles Lawsuit for \$60M

Microsoft Corp. said it has agreed to pay \$60 million to settle a patent infringement lawsuit filed in late 2002 by SPX Corp. in Charlotte, N.C. In November, a U.S. District Court jury in Virginia ruled that Microsoft's NetMeeting conferencing software infringed on a patent held by SPX's Imagemex LLC subsidiary. Microsoft, which is phasing out NetMeeting, said it decided to settle the suit instead of filing an appeal.

CA Agrees to Sell Applications Unit

Computer Associates International Inc. announced a deal to sell its majority ownership stake in ACC-PAC International Inc. to The Sage Group PLC for \$110 million in cash. CA owns 90% of Pleasanton, Calif.-based ACCPAC, which develops business applications for small and midsized users. The sale to U.K.-based Sage will complete CA's withdrawal from the applications market.

Oracle Delivers Documents to DOJ

Oracle Corp. said it has provided the U.S. Department of Justice with all the documents that the agency requested as part of its review of the software vendor's hostile takeover bid for PeopleSoft Inc. Oracle expects the DOJ to rule early this year on whether the proposed deal would be anticompetitive. The company also said it has established a \$1.5 billion credit line to help fund its offer.

Short Takes

IBM introduced an "expansion unit" for adding Serial ATA disk drives to its FASTt midrange arrays. . . . PARAMETRIC TECHNOLOGY CORP. in Needham, Mass., posted software patches designed to fix a coding error that could cause its product life-cycle management applications to become inoperative starting on Jan. 10.

Data Security Breaches Reveal Encryption Need

Technology can help encode info, but management challenges pose hurdles

BY JAIKUMAR VIJAYAN

EVENTS SUCH AS the theft of a laptop PC containing personal information about thousands of a Rhode Island bank's customers have put a spotlight on the importance of encrypting stored data.

But IT security professionals said that substantial logistical and management issues, as well as the relative immaturity of encryption support in databases and operating systems, make the task a daunting one.

In the Bank Rhode Island case, the names, addresses and Social Security numbers of about 43,000 customers were stored in a laptop that was stolen from the Providence-based bank's principal data-processing provider, Fiserv Inc. The data was password-protected but not encoded [QuickLink 43702]. After the theft, Bank Rhode Island's CEO said its IT department will install encryption software on all computers.

That incident came on the heels of one at the Los Alamos National Laboratory in California in which nine floppy disks and a large-capacity hard disk containing classified information were reported missing after a routine inventory check [QuickLink 43538].

The growing problem of identity theft lends urgency to the need to protect stored information, said Gartner Inc. analyst John Pescatore. Regulatory requirements for data confidentiality are also driving changes, Pescatore said. For instance, companies that encrypt data are exempt from the provisions of California's SB 1386 privacy law in the event of a database breach.

The potential for data theft by insiders — an even more serious problem than virus at-

tacks and network intrusions by hackers — is another incentive, said Kevin Brown, a vice president at Decru Inc., a data encryption technology vendor in Redwood City, Calif.

Washington-based SwapDrive Inc., which provides on-line data backup and storage services to more than 150,000 corporate and individual users, is using Decru's DataFort device to protect medical and financial information as well as other customer data.

DataFort encrypts and decrypts data flowing between SwapDrive's application servers and its EMC Corp. storage systems. The process is transparent to end users, with all key management functions being handled by Decru's appliance, said SwapDrive CEO David Steinberg. "It's given our users a lot of peace of mind," he said, noting that DataFort also boosts

Encrypting Stored Data

PROS

- Prevents unauthorized access to data.
- Protects against data loss.

CONS

- May require fundamental changes to storage, backup and retrieval processes.
- Can be costly to implement.

SwapDrive's ability to attract higher-end customers that need more robust security.

Vormetric Inc. in Santa Clara, Calif., also sells encryption technology designed to safeguard data on devices such as PC disks, said Van Nguyen, director of IT security at a Mountain View, Calif.-based high-tech firm that he asked not be named. The company, which has more than 300TB of stored data distrib-

uted across offices in 30 countries, uses Vormetric's CoreGuard products to protect its own intellectual property and that of its customers.

"It protects our data while it's stored, while it's in transit and while it resides on a developer's workstation," said Nguyen. CoreGuard encrypts and controls access to the data and also logs and audits any attempts to compromise the information, he said.

But using encryption to protect stored data isn't easy, said Dennis Szerszen, an analyst at Hurwitz & Associates in Cambridge, Mass. The process can involve substantial changes in the way data is stored, accessed and backed up, he said. Large-scale encryption can also change how applications interact with one another, Szerszen added. And the management and administration of encryption keys can be another big issue.

"There have been a number of very large logistical issues that have prevented people from taking an interest in this," Szerszen said. Until recently, many IT managers thought that not encrypting data was a better option than encrypting it was, he said.

☐ 43743

Users Turn to Microsoft's SMS for Patch Management

Early adopters of new version find tools easier to use

BY CAROL SLIWA

Patch management wasn't a burning concern for many users of Microsoft Corp.'s Systems Management Server when they purchased earlier editions of the software. But that mind-set is changing.

A set of tools for automating the patching process is the No. 1 product feature that customers have been buzzing about since the long-awaited release of SMS 2003 in November, according to David Hamilton, director of Microsoft's en-

terprise management division. Hamilton said he bases that assessment on interviews with customers and on the numerous message boards and community groups he monitors.

"The viruses weren't very smart, so patch management wasn't a huge issue two years ago," said Roger Wilding, a Portland, Ore.-based senior technical engineer who's responsible for 5,000 desktop PCs at CNF Inc., a shipping and supply chain services company in Palo Alto, Calif.

Wilding said automated patch management was too cumbersome and expensive to consider in the past, when viruses were typically con-

OPTIONS

Deploying Patches For Windows

WINDOWS UPDATE Controlled by end users; IT administrators can't target systems.

SOFTWARE UPDATE SERVICES 1.0 Administrators can't target systems. Has limited patch installation status reporting; supports only Windows 2000, XP and Server 2003.

SYSTEMS MANAGEMENT SERVER 2003 Administrators can target systems, schedule patch installations and get comprehensive reports on installation status and results.

fined to individual PCs. But last year, after some nasty viruses hit Windows-based systems on a widespread ba-

Continued on page 12



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Continued from page 10
sis, Wilding turned to Microsoft's Software Update Services Feature Pack for SMS 2.0, before it became available with SMS 2003.

As part of Microsoft's early-

adopter program, CNF in August upgraded to an SMS 2003 beta-test release that included the SUS Feature Pack, and it has since moved to the production version of the change and configuration

management software.

Wilding said the new tools make patches so much easier to deploy that he has more time to test them to make sure they won't cause any problems on CNF's systems.

SMS 2.0 helped IT managers get Windows patches and roll them out to PCs. But users had to take the initiative to identify which machines needed individual patches and then turn the patches into

SMS packages for distribution, said Hamilton.

With SMS 2003, users no longer have to download and configure the SUS Feature Pack, and they can work from the same management interface they use for SMS itself. In addition, they get a new Advanced Client, which uses a Windows technology called Background Intelligent Transfer Services (BITS) to provide connectivity for conducting management operations over low-bandwidth or poor-quality network links.

Michael Niehaus, an IT consultant at Marathon Oil Corp. in Houston, said his company has begun using SMS 2003 to scan workstations and servers for security patch needs and to push patches to the servers. Marathon Oil already had a homegrown process in place for patching its PCs, but Niehaus said he expects to swap that approach for SMS 2003 this year to get BITS and the "network-friendly" Advanced Client technology.

Not for Everyone

But for some users, SMS may not be enough for patch management. Bill Egan, a systems administrator at LendingTree Inc. in Charlotte, N.C., said the company's IT staffers had a steep learning curve with Microsoft's software and found the SUS Feature Pack to be "unwieldy" with SMS 2.0.

LendingTree also uses St. Bernard Software Inc.'s UpdateExpert to push out patches and Shavlik Technologies LLC's HFNetChk to get a more granular view of the patch status of systems. "We found that no one tool was perfect, so we use them to complement each other," Egan said.

There also are still plenty of Microsoft customers who don't use SMS at all. Werner Co., a ladder maker in Greenville, Pa., plans to test SMS 2003, but CIO Robert Rosati said his workers found the previous version "too clunky" for patch management. Instead, Werner built manual packages and deployed them through a custom application.

Q 43724

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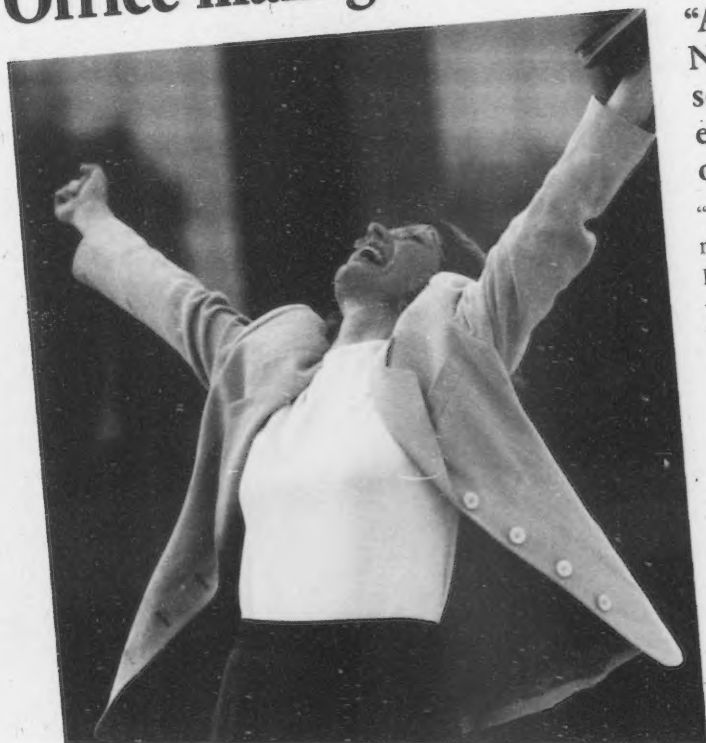
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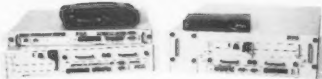
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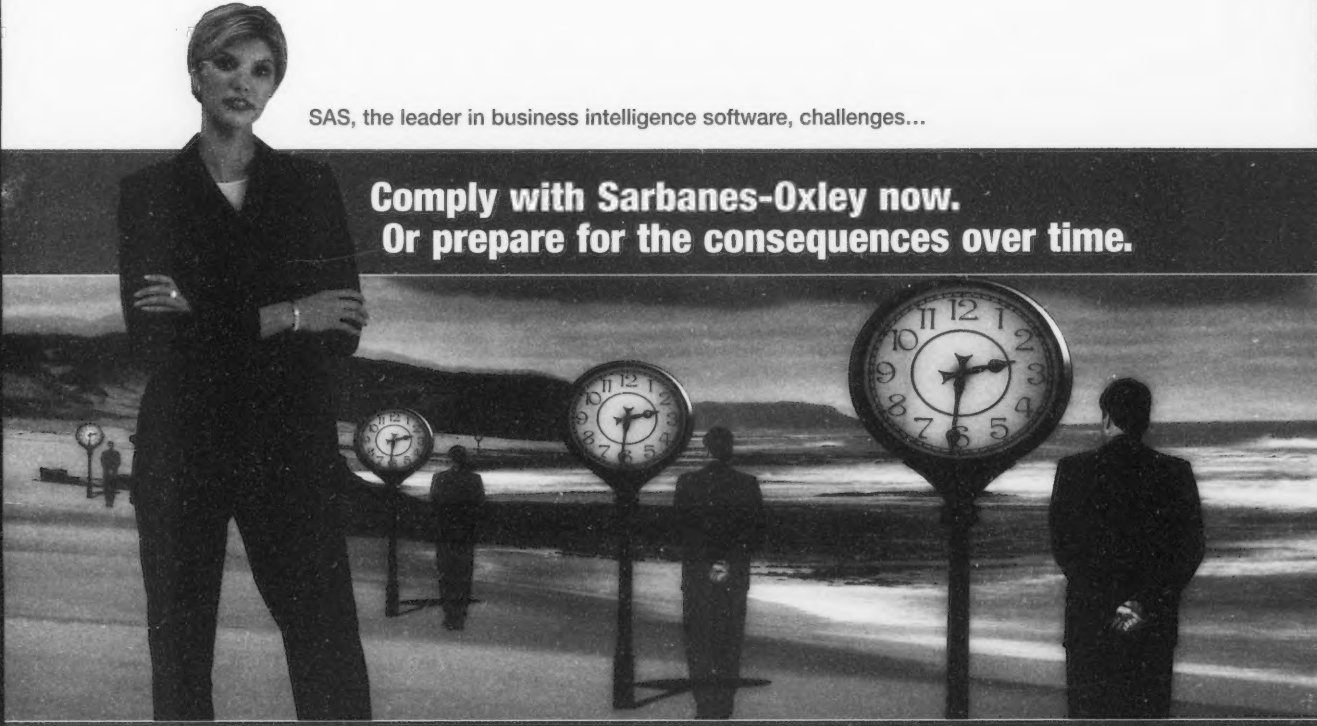


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PREMIER 100 IT LEADERS 2004

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LEARN FROM THE EXPERTS in an ongoing series of Q&As with this year's Premier 100 IT Leaders. Read the first column in this series and submit your own questions online.
QuickLink 43573

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WHAT'S INSIDE



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24 Harry E. Roberts, senior vice president and CIO at Boscor's Department Stores LLC "We weren't going to compromise our [strategic IT project schedule] because of a need to reduce costs. We got very creative and very aggressive instead."



28 Philip J. Brody, chief technology officer of Nevada's Clark County School District "My job is part political and part visionary and part orchestra leader. The biggest lesson I learned in this process is persuading people to buy into the project. Once they have buy-in, they can be counted upon."



40 Kim Perdikou, CIO at Juniper Networks Inc. "Basically, you have to talk through each problem and get to specifics. As soon as you analyze the risk/reward, you're actually taking the emotion out of it. Now you're just studying a business problem."



42 Jean Delaney Nelson, vice president and CIO at Minnesota Life Insurance Co. "We consciously keep an eye on the horizon and categorize the technologies as those in which we want to lead, those we want to keep pace with and those we want to follow."

100 Ways TO LEAD

WHO ARE THESE PEOPLE? Who are these 100 individuals we've singled out for praise and publicity in this special issue? What makes them so unique?

That's for you to judge, actually. We devote our first issue of the year to *Computerworld's* Premier 100 IT Leaders — and they are an impressive lot, but the real verdict is yours. The stories and profiles in the pages that follow (and online at QuickLink a3920) are meant to illuminate and inspire, not to brag or boast.

In fact, most of our Premier 100 leaders cringe at being singled out of the IT crowd for a special honor. Yet they each lead in a unique way, shaped by their company cultures, their backgrounds, their experience. They would all tell you they're not doing anything unusual, which is where we have to respectfully disagree.

Our Premier 100 list honors people who have had a positive impact on their IT organizations in myriad ways (see QuickLink 43549 for our evaluation methodology). They don't just manage people well. The Premier 100s mentor and motivate their staffs during the worst of times. They're adept communicators who are "bilingual" in techspeak and business talk. They inspire trust and earn respect. They lead people and projects to success.

But the stories in this issue aren't just about success and triumph, or about projects where everything went as smoothly as an IBM sales pitch. You'll notice that many of them face a catch-22 of sorts, as they try to balance the need to innovate, protect data and customers, and maintain systems

— meanwhile juggling it all with fewer employees and stagnating budgets.

So the Premier 100s won't talk to you about leadership with stars in their eyes. They cast it more practically, in terms of guiding staffs through significant adversity and dealing with the threats posed by security breaches, ruthless competitors and hungry outsourcing. In the midst of all this, they're also trying to protect their teams and nurture creativity and communication. They're motivating in the absence of big bonuses or sexy new projects.

Perhaps most significantly, they're still willing to take risks in these highly risk-averse times. "The risk in everything is finding the right balance," says Samuel F. Averitt, vice provost for IT at North Carolina State University in Raleigh. "But one of the problems is that every-

thing changes."

Indeed it does, especially in IT. That's why we search each year for the Premier 100 IT Leaders. Once again, we've found 100 new ways to lead.

Q43707



MARYFRAN JOHNSON is editor in chief of *Computerworld*. You can contact her at maryfran.johnson@computerworld.com.

THE Tests OF LEADERSHIP



Delta Technology's BRIAN LEINBACH: "I've borne the brunt of . . . trying to find out how to get the last drop of blood out of the turnip."

Tough-as-nails IT leaders have managed to move their companies and their IT agendas ahead despite budget battles, aggressive adversaries and sagging staff morale.

BY STACY COLLETT

VIRUSES, hackers, unrest in outsourcing locations, employee apathy, a jobless economic recovery and stagnant budgets — these are the challenges that try IT leaders' souls.

While 2003 brought a glimpse of economic recovery, few IT leaders felt a positive impact on technology budgets or staff size. The mantra remains the same: Do more with less.

"This is our third year in a row of flat budgets," says Brian Leinbach, senior vice president of operations at Delta Technology Inc. in Atlanta. "That puts a lot of pressure on [IT] because we can't renew enough technology to continue to drive down costs. I've borne the brunt of that — trying to find out how to get the last drop of blood out of the turnip."

At the same time, many leaders saw technology's role grow in developing business strategy. Chief technology officers and CIOs face a series of dilemmas that look like a catch-22: Continue to innovate, protect data and maintain systems, but do it with fewer staffers and smaller budgets. Outsource to save money, but beware of volatile geographic areas. Give customers greater access to data, but prevent hackers from getting in. Push technology forward, but don't take unnecessary risks. What's more, they're challenged to motivate staffs that often lack innovative projects and performance-based rewards.

But this year's Premier 100 IT Leaders forged ahead with steely determination, creativity and a renewed emphasis on staff mentoring and development. These successful technology leaders have close relationships with executives, actively communicate with business units and consider themselves bilingual, fluent in the vernacular of both business and technology. They anticipate problems that could occur 10 steps down the road and have solutions in mind. They put the success of the company first, often letting others take credit for moving technology forward so that they, too, will defend the decision.

It's all in a day's work when you're helming an IT operation. Several of this year's honorees shared their tests of leadership with *Computerworld*.

Disheartened Employees

Tough times have brought many IT leaders closer to their team members. "As we are continually asked to do more with less, the relationship that you create with members of your team

10 Principles of IT Leaders

1 "There are no systems that can't be changed." — Brad W. Peiffer, group director of global database management, IMS Health Inc.

2 "It doesn't necessarily have to be [the CIO] standing in the limelight to get the IT message across." — Linda L.E. Reino, CIO, Universal Health Services Inc.

3 "When choosing new technology, separate fact from fiction, get away from urban legends, and let the numbers drive the decision." — Jeffrey Campbell, vice president of technology services and CIO, The Burlington Northern and Santa Fe Railway Co.

4 "Be acutely attuned to your company's business strategy and what it could be." — Roy E. Lowrance, CTO, Capital One Financial Corp.

5 "To get a seat at the table, you need to be viewed as someone who handles the tough problems." — Joseph Cleveland, CIO, Lockheed Martin Corp.

6 "The relationship that you create with members of your team allows you to ask for greater commitments." — Mark F. Hedley, senior vice president and CTO, Wyndham International Inc.

7 "Identify risks. There is no hiding them." — Christopher Kowalsky, senior vice president and CIO, Education Management Corp.

8 "Communicate, communicate, communicate. Create a compelling vision for change and why it is important." — Jeffrey Campbell

9 "Be adaptable — that means sensing the next issues before others, then preparing the IT organization." — Joseph Cleveland

10 "Don't 'crush the butterfly.' Too much process crushes the innovation." — Roy E. Lowrance

allows you to ask for greater commitments," says Mark F. Hedley, senior vice president and chief technology officer at Wyndham International Inc. in Dallas. As the travel industry hit rock bottom in late 2001, the \$1.6 billion hotel chain laid off 37% of its IT staff and halted many technology projects, leaving the remaining IT staff stymied. Hedley was challenged to create a stimulating environment for his top technologists. So in December 2002, he came up with what he called an "impossible game" — to earn CMMI (Capability Maturity Model Integration) certification in two years, a feat that usually takes five years.

The certification, which verifies methods of IT development and systems integration, was developed by Carnegie Mellon University and its Software Engineering Institute. Only 23 U.S. companies currently hold the certification, and no hotel IT organiza-

tion had achieved the designation. The team had reached Level 3 by the end of 2003. "That stimulated the group," Hedley says.

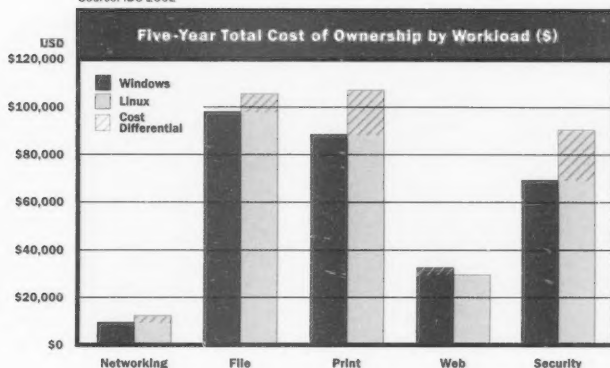
Delta Technology keeps employees motivated by coming up with innovative ideas that might be implemented down the road. "We realize we have to keep the pipeline filled with new ideas. If a good idea is going to more than pay for itself in less than a year, we can make the money available," says Leinbach.

Universal Health Services Inc., a \$3.2 billion hospital management company in King of Prussia, Pa., took advantage of downtime to step up its mentoring program. "I often think employees are set up for failure" by not being told what is expected of them, says CIO Linda L.E. Reino, who makes sure all IT employees know they play an important role, whether they're flipping

Continued on page 20

**REAMS HAVE BEEN WRITTEN ABOUT WINDOWS
AND LINUX. LET'S SKIP TO THE BOTTOM LINE.**

Source: IDC 2002



A recent IDC white paper summarized the five-year cost of ownership of a Linux server environment compared to a Microsoft® Windows® server environment this way: Windows comes out lower in cost in four out of five workloads and 11 to 22 percent lower in cost overall. To get the full study or more third-party findings, visit microsoft.com/getthefacts

Continued from page 17
the switch on a new system or holding down the fort back at the office.

Managing Risky Situations

Tenacious network viruses and the threat of terrorist hackers kept IT leaders on alert in 2003. "The Blaster worm virus was a huge wakeup call for all of us, because that was the first virus that was delivered through a network pipe" rather than via an e-mail attachment, says Jeffrey Campbell, vice president of technology services and CIO at The Burlington Northern and Santa Fe Railway Co. in Fort Worth, Texas. "It cost us hundreds of man-hours. We had to issue patches and send troops into the field to download to our field devices."

Campbell says virus prevention and maintenance drain dollars away from innovation and delivery of new products, but it's an expense the railroad won't skimp on.

Concerns about instability in many popular offshore outsourcing locales are also demanding more resources, time and attention than ever before.

"I have 40% of my applications development and maintenance being built or delivered offshore in India. There are ongoing pressures about that region," says Campbell, referring to the country's conflict with Pakistan

TOP 10: Whom they admire most in the computer industry or business world

1 Bill Gates	6 Lou Gerstner
2 Michael Dell	7 Scott McNealy
3 Carly Fiorina	8 Steve Jobs
4 Linus Torvalds	9 Bill Joy
5 John Chambers	10 Eric Schmidt

over Kashmir. To manage risk, Campbell has backup centers outside that region, and he has taken other precautions as well. "We're ensuring that all of our contractors go through intensive security background checks, making sure our QA and test teams can adequately test for back doors," he says.

Capital One Financial Corp. CTO Roy E. Lowrance believes in the financial and staffing advantages of outsourcing but says it took three months of debate before the financial services firm agreed to send some of its work to India, after addressing concerns about the security of its data. "We're proceeding slowly and carefully," he says.

Domestically, keeping networks free from intruders while expanding Web-

based access to information presents new challenges for CIOs.

Lockheed Martin Corp. spent the past decade fortressing its IT perimeter against intruders. Now CIO Joseph Cleveland's team is finding new ways to let some external users inside as part of its secure collaboration efforts with other Lockheed business units and with the Defense Department and other federal agencies.

"Instead of keeping people out, you have to let the right people in for the right information, limit what they should see, then almost in a dynamic way be able to eliminate those privileges when you need to," Cleveland explains. "It's a huge challenge in terms of [creating] all of the process and getting the technology and tools that are scalable to achieve that in a \$27 billion corporation."

Collaboration can also bring some opposition from business units that are reluctant to relinquish IT control. But Cleveland is winning supporters and has earned the trust of executives with his track record of successfully combining other IT business processes, beginning in 1995 when Lockheed merged with Martin Marietta. "To get a seat at the table, you need to be viewed as someone who handles the tough problems," Cleveland says.

Always Moving Forward

Beyond handling damage control and treading through stagnant budgets, Premier 100 honorees are called upon to lead their companies into the future — by centralizing processes, upgrading technology and exploring new innovations. Sometimes that requires making risky decisions that are mitigated by experience.

"The CIO has to be that cheerleader, that visionary, that driver who has the confidence that things can be done, but also makes sure that resources are brought such that it can be successful," says Christopher Kowalsky, senior vice president and CIO at Education Management Corp., a \$500 million provider of postsecondary education based in Pittsburgh. "They also must identify and communicate the risks, because there are risks and there is no hiding them. You need to communicate them at all levels of the organization."

When all is said and done, these IT executives agree that communication, motivation, business acumen and a compelling vision for change are the characteristics that IT leaders need now and in the future. **43098**

Collett is a freelance writer in Chicago. Contact her at stcollett@aol.com.

Guiding Staff Through Turbulent Times

Brian Leinbach, 43, senior vice president of operations at Delta Technology Inc. in Atlanta, says that while the outlook for the airline industry is better than it was in 2001, there are no sunny skies yet. Meanwhile, IT leaders are under continuous pressure to squeeze more value out of technology while the industry waits for a recovery. Writer Stacy Collett spoke with Leinbach about the challenges of leading Delta's 900 IT employees through the tough times.

What are your biggest IT leadership challenges? This airline has gone through so much change since 9/11. It rocked our world. The parameters under which we run this airline were dramatically changed forever — the way we do our jobs, the way we screen employees, the

security we have on our campus, the level and review we now have [regarding] customer data, respecting privacy and at the same time adhering to all the new laws. The whole way we run the airline is being rethought every day. Getting people to maintain a positive attitude through that is a real challenge because it can grind you down.

How do you keep your team motivated? We celebrate the small victories. We're making progress with technology that's visible with customers. We've pushed out more kiosks in airports to streamline check-in and added Delta Direct phone banks to directly connect to reservations.

What have these experiences taught you about leadership? Pay attention to

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■ As operations leader at Delta Technology, Leinbach manages 900 full-time employees and 75% of its operating budget. He joined the company in July 2000.

the personal side of the business and how changes in the way we do our daily jobs affect employees' lives.

How do you lead the technology side of the business? The airline industry has such a tightly integrated set of technology. It's a logistics challenge. You have to get a crew, passengers, catering, fuel and luggage in an airplane in 30 to 45 minutes. Sometimes the simplest change to the business model ripples through 10

to 20 systems. [At the same time], the business wants us to be instantaneously responsive. We've got to be responsive and say we need to test it, validate it and not break something we didn't intend to touch.

It also requires a lot of balance. Let people speak their mind and bring their ideas forward. We've relied on looking at a tight business case around what they are proposing.

What are the benefits to the airline?

The airline is going through so much to try to shape itself and re-address low-cost competition from carriers. We're testing food for sale and how much leg room on a particular airplane. The ripple effect back to technology is tremendous. Delta is going to look very different as we emerge from this.



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Budgets

When your primary job is to ferret out liabilities in IT projects — and minimize them — timing is everything.

BY JULIA KING

GONE ARE THE DAYS of the slam-dunk, no-brainer IT decision. Every choice a CIO makes in today's painfully cost-constrained business environment is high risk.

Delaying or scaling back a pricey CRM project to stay within the corporate budget can mean losing customers in the long run. Laying off IT employees to slash labor costs can shatter morale and create skills gaps later on.

"The risk in everything is finding the right balance. But one of the problems is that everything changes," says Samuel E. Averitt, vice provost for IT at North Carolina State University in Raleigh. "Decisions we make today are not necessarily going to be good ones for tomorrow."

As IT executives shift more and more into the role of risk manager,

their primary job is to diligently and continually identify, weigh and — above all else — minimize the liabilities associated with all IT projects.

The key, say several of this year's Premier 100 IT Leaders, is to pay keen attention to timing, focusing primarily on the long term. Immediate savings from budget or staff cuts that do nothing to move the business closer to its long-term goals add up to little more than eye candy on the balance sheet.

Harry E. Roberts, senior vice president and CIO at Boscov's Department Stores LLC in Reading, Pa., was charged with cutting his budget significantly in 2003. But after thoroughly reviewing the \$1.1 billion retailer's IT project roster, Roberts concluded that if the company wanted to meet its strategic business objectives, "the major things we needed to do, we still needed to do."

That's when Roberts and his team turned their full attention to Boscov's telecommunications contracts. Roberts dumped the company's two big-name vendors — Verizon Communications and MCI — and signed an enterprise deal with a little-known regional carrier, D&E Telephone Co. in Ephrata, Pa. The risk: "We traded some of that security that comes with a national vendor," Roberts says. But in doing so, Boscov's also saved \$1 million and cut its long-term communication costs.

In yet another gutsy move, Roberts shifted certain retailing applications from a Windows NT Server environment to a Linux-based IBM mainframe. In the process, he virtually eliminated client/server computing costs that had been spiraling out of control.

"We made the decision that we could no longer expand the server farm that was growing at a rapid rate. We kept having to hire [a full-time IT employee] for every 10 to 12 servers we brought online," Roberts recalls. "The risk was in making the transition from one vendor's software to another without missing a lot of time for training."

But with help that Roberts negotiated from Boscov's three primary IT vendors, lost time was minimal and the retailer has saved "at least six to seven man-years that we would have had to pay for with client/server," he says.

"The theme here is that we weren't

going to compromise our [strategic IT project schedule] because of a need to reduce costs. We got very creative and very aggressive instead," says Roberts.

Shift Pricey Investments

During the energy crisis of 2001, timing was also the main issue for Solomon Tessema, director of enterprise architecture and telecommunication services at Southern California Edison Co. in Rosemead. "We had some drastic cuts in our budget. We were forced to conserve cash so we could keep the lights on for customers," he recalls. "But we also had to be careful about not doing any long-term damage."

Tessema targeted capital-intensive projects, including a telephone exchange modernization project and an electricity distribution automation project, for major cuts. Both projects would have yielded immediate increases in operational efficiency if they had gone forward as planned, but they also would have required a large outlay of cash. The better risk management decision, Tessema concluded, was to tolerate the inefficiencies until the energy crisis abated. Even if they were delayed, both projects would still ultimately yield the same efficiencies. Deferring them was a way of saving much-needed cash in the short term with minimum risk, he notes.

To manage risk well, "you have to

ON-THE-JOB Hazards

Challenges from all sides kept IT leaders on their toes this year. Here's a look at the top five difficulties facing today's IT leaders and how they're making the right choices, managing the risks and fending off the threats.

Security

These guardians of the gate have found ways to effectively lock down their companies against ever-increasing threats.

BY DAN VERTON

LIKE AN ARMY UNDER ATTACK, most companies today find themselves surrounded by a growing number of threats, vulnerabilities and regulatory challenges. But the most successful and secure organizations are finding that in a world of limitless technology choices, the leadership abilities of their CIOs and chief information security officers are what make the difference.

David Jordan knows what it's like to be a wartime security leader. For the

past two years, the CISO for the Arlington County Government in Virginia has had to deal with the ballooning security needs of federal intelligence agencies, the Pentagon, Reagan Washington National Airport and 3,500 county employees.

"I started the way a lot of people start, and that is with no staff and no budget," says Jordan. Prior to the Sept. 11 terrorist attacks, the county's IT security department had "no plan, no program and no buy-in," he recalls. "So

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AGENDA INSIDE!
March 7-9, 2004

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Conference sessions will cover these critical areas:

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- Charting New Directions in IT Governance, Regulatory Compliance and Project Leadership
- Advancing Security and Business Continuity

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First VP, Chief Information
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NICHOLAS G. CARR
Author of "Does IT Matter?
Information Technology and the
Corrosion of Competitive
Advantage"



BOB METCALFE
Inventor of Ethernet,
Founder of 3Com Corporation,
General Partner of
Polaris Venture Partners



DOUG BUSCH
VP & CIO
Intel



BRIAN LEINBACH
SVP of Operations
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Mapping the Future of IT: March 7-9, 2004

- Exchange Innovative Ideas and Strategies with Computerworld's Premier 100 IT Leaders
- Witness an Industry First as Bob Metcalfe Debates Nicholas Carr about Why IT Matters
- Learn How Some of the World's Leading Companies are Tackling Tough Choices with Infrastructure, Integration, Security and IT Governance

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Computerworld's Premier 100 IT Leaders Conference is a dramatically different, high impact executive event. Now in its 5th year, this annual conference brings together hundreds of senior IT executives for a compelling series of high-level discussion panels, presentations and peer networking activities.

The Premier 100 IT Leaders for 2004 will be announced and profiled in our January 5, 2004, issue of Computerworld and honored during a special ceremony at the March 7-9, 2004, conference. Rich with peer advice and real-world case studies, the conference content is built directly from user feedback provided by the honorees themselves. Our editors design a no-nonsense agenda that features Premier 100 honorees and other IT leaders focusing exclusively on top-of-mind issues and concerns of senior IT management.

WHY YOU SHOULD ATTEND

Are you responsible for mapping the future of your organization's information technology? Want to exchange innovative ideas and strategies with other top IT executives? Then attend Computerworld's Premier 100 IT Leaders Conference, the ONLY conference where you can hear from – and network with – Computerworld's Premier 100 IT Leaders.

WHO ARE THE PREMIER 100?

They are a unique set of award winning IT executives with valuable lessons to share and advice to offer YOU. They are technologists who understand business needs, take calculated risks and lead through innovation. They are CIOs, vice presidents of IT, directors of IT and business managers honored as Computerworld's Premier 100 from a wide swath of vertical industries. When you attend this unique conference, you will hear proven examples of how these IT Leaders have advanced their organizations through innovative leadership and proven strategies.

WHAT IS UNIQUE?

Crafted by Computerworld editors, this conference offers a radical departure from the standard IT event. With a focus on great ideas, best practices and real applications of IT strategy, you'll gain direct insight from leading user organizations. The major sessions provide highly interactive, entertaining discussions with IT Leaders and industry experts – each moderated by Computerworld editors in a town-hall meeting format. Key topics center on the intersection of technology and business in areas critically important to today's IT management.

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MARYFRAN JOHNSON
Editor in Chief
Computerworld

SPECIAL GUEST SPEAKER:



BEN STEIN
Author, Humorist,
Lawyer, Economist,
Actor and Educator

AGENDA: SUNDAY, MARCH 7, 2004

Also available at www.premier100.com/cwt

12:00pm - 5:00pm

Pre-conference Golf Outing

Sponsored by:



7:00pm - 9:00pm

Welcome Reception



AGENDA: MONDAY, MARCH 8, 2004

www.premier100.com/cwt

7:00am - 8:00am

Buffet Breakfast

8:00am - 8:15am

Welcome and Opening Remarks

Maryfran Johnson, Editor in Chief, Computerworld



8:15am - 8:45am

Opening Keynote Address: From IT Expense to IT Value

Glen Salow, EVP & CIO, American Express



At American Express Company, everything rides on the IT "manufacturing plant" forging the value chain for this diversified global provider of travel, financial and network services. During the past few years, CIO Glen Salow has crafted a new value agenda for IT within the company, turning relationships with the business side into partnerships, leading a critical move to outtask the company's technology operations and managing demand for technology services in ways that saved significant expense. As one of the earliest of IBM's "Computing on Demand" customers in 2002, Salow transitioned approximately 2,000 employees in markets around the world to IBM and crafted a similar but smaller deal with AT&T for networking services. The end result is a far more flexible IT infrastructure that responds swiftly to business change. In his keynote address, Salow will talk about recasting IT from a cost center to a value producer, and how IT leaders who concentrate on delivering value will build the best futures for their own companies.

8:45am - 9:30am

Discussion Panel: The Once and Future Infrastructure: An Enterprise Reality Check

Panel Moderator: Patrick Thibodeau, Senior Reporter, Computerworld

Panelists: Perry Ciliburn, CIO, Hewitt Associates; Steven Sheinheit, SVP & CTO, MetLife Inc.; Evon Jones, SVP & CIO, The Dial Corp.; Michael Ashworth, Managing Director & CIO, JP MorganChase Investment Bank



IT leaders are inundated with vendor pitches for autonomic, "on demand," and various forms of utility "pay as you go" computing, but how well do these evolving computing models match the actual needs of the enterprise? Upgrading their aging corporate infrastructures is indeed a top priority for many companies today, but the task involves a complex cascade of decisions around desktop management, server consolidation, blades and clustering, open source, wireless and even outsourcing considerations. Alternative financing and new sourcing approaches also come into play, but what are the tradeoffs? Loss of flexibility and control? Vendor lock-in? This panel of experienced senior IT managers will tackle these tough questions as they talk about their strategies, plans and problem-solving approaches to building out a "once and future" infrastructure primed for business growth.

9:30am - 10:15am

"Best in Class" Project Leadership Lightning Round

Witness a fast-paced trio of user presentations and audience Q&A, featuring the most innovative, high-impact case studies from the Premier 100 honorees.

10:15am - 10:30am

Break

10:30am - 11:00am

Evaluating Infrastructure Renewal Through Scenario-Based Decision-Making

Brian Leinbach, SVP of Operations, Delta Technology, Inc. (a unit of Delta Air Lines)



IT managers have long known that the cost of development and initial deployment of IT systems is quickly matched by the cost of system maintenance. In order to communicate this to its parent company, Delta Technology developed a business risk analysis tool that addresses the infrastructure renewal of technology assets by reviewing the following characteristics: technology age, business value at risk, platform supportability, platform complexity and risk of failure. This session addresses how, by developing a standardized risk scoring process and using scenario-based decision processes, companies can evaluate proposed infrastructure investment scenarios and identify mitigation strategies.

11:00am - 11:30am

Concurrent Sessions: IT User/Customer Case Studies

11:30am - Noon

Concurrent Sessions: IT User/Customer Case Studies

Noon - 12:30pm

Concurrent Sessions: IT User/Customer Case Studies

12:30pm - 1:30pm

Interactive Luncheon

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Susan Ungler
Senior VP and CIO
DaimlerChrysler

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"You hear about six degrees of separation. The Premier 100 melts away a few of those layers. I've met people here that I've known for a long time and others I've been eager to meet for years, all converging in one place."

William Farrow
EVP & CIO
Chicago Board of Trade
Chicago Board of Trade

1:30pm - 2:00pm



The Road to a Service Oriented Architecture: A Pfizer Case Study

Joe Schmadel, Senior Director of Business Technology, Pfizer, Inc.

When Web services made their debut at the turn of the millennium, the world's largest pharmaceutical company, was like most large organizations - looking for a magic bullet technology to tackle application, process, and data integration without a staggering price tag. As a champion for change at Pfizer, Joe Schmadel leveraged this novel technology to transform the firm's financial systems architecture into a nimble, transparent network of powerful methods, which were cheap to create, and even cheaper to maintain. Today, after several years of evolution, Pfizer can now deploy a number of its complex financial applications with virtually any look and feel, and with minimal customization. In this talk, Schmadel will show how the technology, the applications and the people involved helped Pfizer emerge as a leader in service-oriented architecture design.

2:00pm - 3:15pm



Discussion Panel: Riding a Tidal Wave of Change - Data Management, Enterprise Integration and Web Services

Panel Moderator: Don Tennant, News Editor, Computerworld

Panelists: David Thompson, CIO, PeopleSoft; Danny Siegel, Senior Manager of Business Technology, Pfizer, Inc.; Patricia Coffey, Assistant VP, Allstate Insurance Company

Finding the most innovative yet cost-effective ways to manage data and integrate business and technology processes are among the most formidable challenges facing IT organizations today. But there are some compelling approaches emerging. Web services, in particular, hold the potential to enable companies to leverage software technologies (such as Sun's J2EE and Microsoft's .Net) more effectively, develop and build new applications faster, and integrate legacy and Web applications more gracefully. Yet questions about lax security and slippery standards compliance continue to plague Web services. The success (or failure) of integration projects is especially visible across a company's supply chain, in its wireless strategies and in business intelligence efforts. This panel will deliver a lively exchange of experience and advice on the key issues surrounding enterprise integration, including the skill set and cost challenges driving many companies to outsource development.

3:15pm - 3:30pm

Break

3:30pm - 4:00pm



Project Disasters: How to Predict Them, Prevent Them or Pull the Plug on Them

Paul Glen, President of C2 Consulting, Computerworld Management Columnist and Author of "Leading Geeks"

Despite significant progress over the last decade, project success rates are still dismally poor. Only about one-quarter of all IT projects are completed successfully. The rest are canceled completely or finished up late, over-budget and sometimes missing major functionality.

When used well, traditional IT project management approaches can provide excellent information about what happened, but they're lousy at predicting the future. In this presentation, Paul Glen will identify the five leading indicators of project success and show how to use them to predict the future, prevent problems and emerge a hero with technologists and business executives alike.

4:00pm - 4:30pm



Does IT Matter?

Nicholas G. Carr, author of "Does IT Matter? Information Technology and the Corrosion of Competitive Advantage"

Far from being a potent strategic weapon, information technology is increasingly a commodity input - a cost of doing business that must be paid by all but provides distinction to none. Building on his controversial Harvard Business Review article "IT Doesn't Matter," Nicholas G. Carr will show how a combination of technological, economic, and competitive forces has neutralized IT's power to deliver strategic advantage to individual companies. And he'll lay out a new agenda for IT management and investment - one that is focused on containing costs and tempering risk rather than aggressively pursuing innovation.

4:30 - 5:00pm



Why IT Matters

Inventor of Ethernet, Founder of 3Com Corporation and General Partner of Polaris Venture Partners

In this spirited counterpoint to the previous session, Bob Metcalfe will bring his long experience from four IT innovation careers to bear on Nicholas Carr's contentions about IT, which Bob considers - just for starters - in a good natured MIT engineer versus Harvard MBA sort of way, to be complete rubbish.

5:00 - 5:30pm

Mapping the Future of IT: A Debate Featuring Bob Metcalfe and Nicholas Carr

5:30pm - 8:00pm

Expo and Networking Lounge Open, Networking Reception and Buffet Dinner

AGENDA: TUESDAY, MARCH 9, 2004

www.premier100.com/cwt

7:00am - 8:00am

Buffet Breakfast

7:15am - 7:45am



Breakfast Address: Homeland Security - Public/Private Partnerships & The Cost of Failure

Dan Verton, Senior Reporter, Computerworld, and author of "Black Ice: The Invisible Threat of Cyber Terrorism" Cyber security is the common thread that ties together the nation's most pressing homeland security and critical infrastructure protection challenges -- challenges that could be with us for many decades as the war on terror unfolds. But does the absence to date of a second major terrorist attack on the U.S. indicate that the so-called public-private partnership between the government and the private sector is really working? Or is it quietly failing due to behind-the-scenes conflicts and political skirmishes between the public and private organizations responsible for our common defense? Computerworld's Dan Verton will kick-off a day of security, business continuity and project leadership discussions with a revealing look at what's gone right, what's gone wrong and why failure cannot be an option.

8:00am - 8:15am

Opening Remarks

Maryfran Johnson, Editor in Chief, Computerworld

8:15am - 9:00am



Opening Keynote Address: Sixteen Years of Focus on Improving Corporate Information Security - Did It Make A Difference?

David Bauer, First Vice President and Chief Information Security & Privacy Officer, Merrill Lynch In 1988 at Bellcore, David Bauer and a colleague sent out the first formal security alert ever distributed by a commercial information sharing and analysis center. At the time, it was a breakthrough service. Today, it's merely a typical component of a normal - and massively more complex - security operation. Although concerted effort and significant money have been spent since that time, many business pain points still exist today. In this presentation, Merrill Lynch's Chief Information Security and Privacy Officer will reflect on a decade and a half of information security issues. He'll examine the most critical factors shaping the future of corporate security and privacy leaders, bringing a longtime practitioner's view to the current state of the art and the evolutionary forces driving information security into the next decade.

9:00am - 9:30am



The Myth of Corporate Security: Why CIOs are Mad as Hell and not Going to Take it Anymore

Alan Paller, Executive Director of Research, SANS Institute

From his unique research and training perspective on the security industry, SANS Institute's Alan Paller will start off this session with a live demo of a hacking incident to show just why CIOs are so irate about the poor quality of protection their software and systems provide today. Who is to blame here, and what's being done about it? Why are security staffers constantly fighting a war they never seem to win? What can you do about users who ignore procedure and worsen security problems? What recourse is there against vendors who deliver unsafe systems? In this session, Paller will introduce you to several CIOs who have made dramatic, sometimes harsh moves that forced real change. He'll show what they did and how they did it and, in a couple cases, who got in the way.

9:30am - 10:15am



Discussion Panel: No More Excuses - Responding to the Demands of Data Privacy Laws, Regulatory Compliance and Other Business Mandates on Corporate IT Security

Panel Moderator: Dan Verton, Senior Reporter, Computerworld, and author of "Black Ice: The Invisible Threat of Cyber Terrorism"

Panelists: Marc S. Sokol, CISM, The Guardian Life Insurance Company of America; William Farrow, EVP & CIO, Chicago Board of Trade; Al Brusewitz, Chief Information Security Officer, Chief Information Office, County of Los Angeles

The security agenda for 2004 is long on mandates but short on money, leaving IT to battle with few resources against a slew of malicious attacks, tough new data protection laws and demands for metrics that demonstrate effectiveness of information security procedures. The long list of pressing concerns confronting Chief Security Officers and IT leaders includes regulatory compliance practices, application and network security, spam, enterprise monitoring, benchmarking against standards and disaster recovery responsiveness. How are leading organizations juggling and responding to these myriad challenges? When everything is a priority, how can you possibly prioritize? What kind of metrics are proving most effective in gaining support and understanding from the business side? This panel will hone in on what's working (and what isn't) in their own companies, sharing a wealth of practical advice and fresh insight about how to answer the security challenges facing so many IT organizations today.

10:15am - 10:30am

Break

10:30am - 11:00am



Selling Security to Your Beady-Eyed, Bean-Counting CFO

Doug Lewis, Senior Partner, The Edge Consulting Group, Atlanta, and former CIO, InterContinental Hotels Group From the "been there, done that" perspective of a longtime CIO, Doug Lewis will walk you through his methodology for building a business case for security spending with the biggest corporate roadblock of all: the Chief Financial Officer. This presentation will lay out a detailed, three-step process for determining appropriate security levels, building an affordable security plan and mapping out the ROI-based business case that senior executives will respect and support. Lewis will reveal everything from the raw ingredients of building a successful business case to the reasons why IT groups should outsource vulnerability assessments and penetration tests against key systems. He'll also explain the folly of low-balling the TCO (Total Cost of Ownership) of an expensive security overhaul, and provide specific examples (including the math) from several industry case studies.

"Because of the quality of the audience - CIOs, CTOs, VPs - we find this event an important opportunity to talk to key stakeholders who are critical to the IT industry."

Scott Charney
Chief Security Strategist
Microsoft
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AGENDA: TUESDAY, MARCH 9, 2004

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"I've attended the Premier 100 for three years and I am astounded at how profound the speakers have been. The content of the presentations is exceptional and consistent, and the audience is high-level and deeply engaged. Computerworld has this down to a science."

André Mendes
Chief Technology
Integration Officer
PBS



11:00am - 11:30am



Managing Risk in Outsourcing Deals

Paul Roy, Attorney and Partner at Mayer, Brown, Rowe & Maw of Chicago

There is a unique risk profile to major outsourcing deals, which have more in common with a large merger and acquisition than the standard procurement of IT services. The process of transferring people and mission-critical functions to a third party is fraught with pitfalls and long-term consequences, but there are practical, proven approaches to maximizing value and minimizing risk in these deals. What these complex contracts require is a fundamentally different approach, says Paul Roy, who has advised and represented clients such as P&G, Motorola and Bank of America in some of the country's largest outsourcing deals. In this talk, Roy will cover the most effective risk mitigation devices, contract protection mechanisms and negotiation tactics that every IT leader should know.

11:30am - Noon

Concurrent Sessions: IT User/Customer Case Studies

Noon - 12:30pm

Concurrent Sessions: IT User/Customer Case Studies

12:30pm - 2:00pm

Expo and Networking Lounge Open and Buffet Luncheon

2:00pm - 2:45pm



Discussion Panel: IT Governance, Risk Management and the Future of the IT Organization

Panel Moderator: Julia King, National Correspondent, Computerworld

Panelists: Frank Modruson, Managing Partner and CIO, Accenture; Vince Campitelli, Senior Vice President and Managing Director, Wachovia Corporation; Jeffrey Campbell, Vice President Technology Services & CIO, Burlington Northern Santa Fe Railway; Bruce Goodman, SVP & Chief Science and Information Officer, Humana Inc.

Many CIOs and senior IT executives are moving into expanded roles in 2004, as risk management, regulatory compliance, vendor/supplier negotiations and outsourcing management all become standard components of their leadership roles. But is IT governance ready to evolve beyond its previously narrow focus on technology spending and labor costs - into real partnership with business objectives? How should potential IT investments be evaluated and mapped to company-wide priorities? What skillset changes does the current IT organization need most? Where will future project leaders come from if outsourcing continues its aggressive growth? This panel will focus on these critical issues confronting corporate IT, and offer some experienced guidance on how to prepare for the high-risk changes ahead.

2:45pm - 3:30pm



Integrating Human Capital: The Magic of Creative Adaptive Planning

Moshe Rubinstein, UCLA Distinguished Engineering Professor, and author of "The Minding Organization"

The most important thing to know about planning is that organizations do entirely too much of it, says this distinguished UCLA professor and author. Too many detailed rules constrict an organization's creativity and suck the life out of our capacity for adaptive planning. In his highly engaging, dynamic interaction with the audience, Moshe will illustrate the power of human problem-solving behavior. He will demonstrate the principles of complexity theory and the importance of living in a world that moves beyond its narrow focus on productivity and service and on to better ways thinking and behaving.

3:30pm - 3:45pm

Break

3:45pm - 4:15pm

Solve My Problem: A Town Hall Meeting on Risk Management and Project Leadership

Moderators: Maryfran Johnson, Editor in Chief, Computerworld; Doug Busch, VP & CIO, Intel Corporation

4:15pm - 4:45pm



Mobilize for Innovation

Thornton May, Futurist and Computerworld Columnist

How do we judge technology leadership in today's complex and troubled business climate? Emulating old-think industrialist CEOs is a sure-fire trip to the dust heap of history. True IT leaders understand that the most unambiguous evaluation of leadership is performance - its perception and its reality. Given the powerful technologies available at close-to-commodity prices, the Suits are not out of line in asking, "What value is your IT organization creating today?" It is time to shift the IT engine of growth out of reverse and into overdrive. Tapping into his extensive research and consulting work with hundreds of CIOs, futurist Thornton May will zero in on the reasons so many IT restructurings fail and provide powerful insight from the top of the IT food chain. How are the world's best IT leaders reorganizing IT to transform business and gain control over the IT supply chain? Thornton will rattle your cage and stimulate new thinking about how companies should be mobilizing for the coming age of hyper-innovation.

4:45pm - 5:15pm



How to Ruin Your Life

Ben Stein, Author, Humorist, Lawyer, Economist, Actor and Educator

AGENDA: TUESDAY, MARCH 9, 2004

www.premier100.com/cwt

- 5:15pm - 5:30pm **Final Remarks and Conference Summary**
Maryfran Johnson, Editor in Chief, Computerworld
- 7:00pm - 7:30pm **Cocktail Reception**
- 7:30pm - 9:30pm **Gala Evening: Best in Class Awards Ceremony, Dinner, Honoree Recognition and Entertainment**
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Curtis Robb
CIO

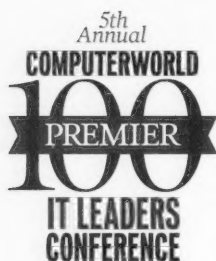
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IT End-User* Application for Conference Registration



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☐ Real Estate
☐ Telecommunications
☐ Wholesale / Retail (non-computer)
☐ Computer Service Provider
☐ Advertising / Marketing / Public Relations
☐ Entertainment
☐ Education
☐ Food Industry
☐ Government / Military
☐ Healthcare / Medical Services
☐ Travel / Hospitality / Recreation
☐ Manufacturing (non-IT)
☐ Automobile
☐ Transportation / Utilities / Energy
☐ Computers, Communications or Peripheral Equipment or Software Manufacturing
☐ Agriculture / Forestry / Fisheries
☐ Other

Number of employees in your entire organization (ALL locations):
☐ 10,000 +
☐ 5,000 - 9,999
☐ 1,000 - 4,999
☐ 500 - 999
☐ Under 500

Your job title/function:
☐ CEO/COO/Chairman/President
☐ CIO/CTO
☐ VP/IS/Manager
☐ IS/IT Director/Manager
☐ Other IS/IT Department Manager/Supervisor
☐ Other Corporate/Business Manager
☐ Corporate/Business Staff
☐ Consultant (Internal) or Other

The one item that best describes your involvement in the IT purchase process:
☐ Authorize the purchase
☐ Approve the budget
☐ Initiate the purchase
☐ Evaluate/recommend products, brands, vendors
☐ Identify/establish the need to purchase

What is your organization's primary vendor for servers?
☐ Dell
☐ Hewlett Packard/Compaq
☐ Hitachi
☐ IBM
☐ Sun
☐ Unisys
☐ Other

What is your organization's most mission critical development/implementation project this year:
☐ Business Intelligence/Data Management
☐ Web Services
☐ Mobile/Wireless
☐ Network Infrastructure/Storage
☐ Security
☐ Linux
☐ Enterprise Integration

What is the estimated annual revenue of your entire organization?
☐ \$10 Billion+
☐ \$1 Billion - \$9.9 Billion
☐ \$500 Million - \$999 Million
☐ \$100 Million - \$499 Million
☐ Less than \$100 Million

What is your organization's annual IT/IS budget for all IT/IS products?
☐ Over \$1 Billion
☐ \$500 Million - \$999 Million
☐ \$100 Million - \$499 Million
☐ \$10 Million - \$99 Million
☐ \$1 Million - \$9.9 Million
☐ Less than \$1 Million

Payment Method

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 Mail to: Computerworld, Attn: Pam Malingsowski, 500 Old Connecticut Path, Framingham, MA 01701

☐ American Express ☐ VISA ☐ MasterCard
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Expiration Date: _____

Card Holder Name: _____

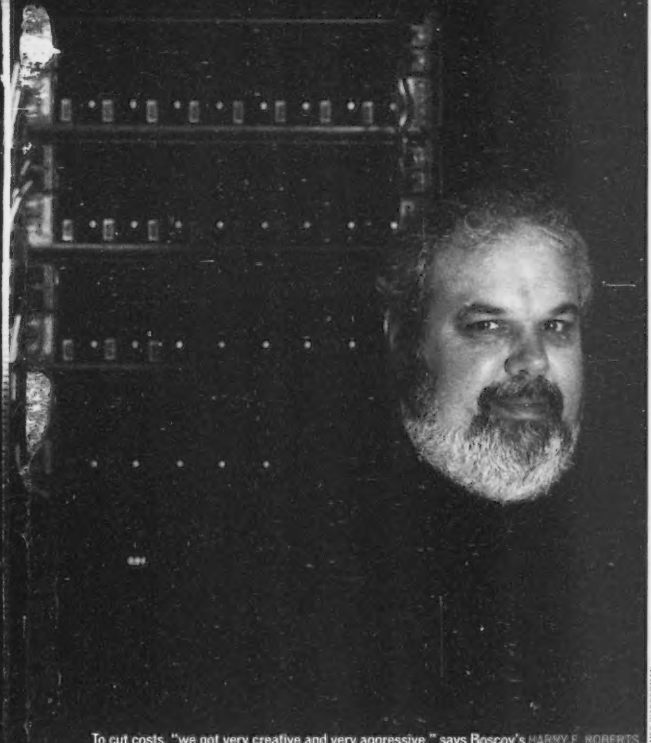
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To cut costs, "we got very creative and very aggressive," says Boscov's HARNY E. ROBERTS.

assess and reassess," says N.C. State's Averitt. "You have to maintain continual awareness of the status of all initiatives and the changing environment. And everything is not going to work. You're going to try things that won't work and then shift investments and energies."

That's precisely what Carlos M. Recalde, executive director of technology for the Americas region at KPMG LLP in Montvale, N.J., did in pulling the plug on a planned multimillion-dollar project to upgrade the firm's aging file-and-print server infrastructure.

"We had committed over \$5 million to the project, and the ROI was quite compelling — all savings for the IT budget," Recalde says. But as specified, the project focused exclusively on a like-for-like replacement of an infrastructure whose design was almost 10 years old. "We were about to drop a pretty big sum of money into an infrastructure that is not likely to support upcoming business needs," he says.

Recalde persuaded the firm's business leaders to abandon the server upgrade project and instead define the scope of an infrastructure upgrade project with long-term value.

Once again, the primary factor in reducing risk was timing, Recalde says.

"Success was in holding back our investment dollars until we can make better use of them," he says. **42778**

Booster Shots

Tips from this year's Premier 100 IT Leaders on how to keep your staff motivated in trying times:

■ **Increase training.** At the height of the energy crisis, amid budget cuts, Southern California Edison expanded training opportunities for its IT workers. "We used this time very productively and kept employees' morale very high," says Solomon Tessema, director of enterprise architecture and telecommunication services.

■ **Focus on long-term planning.** Tessema also charged the IT staff with coming up with a three-year technology road map and a plan for introducing mobile technologies into the company. Both projects served as "an affirmation of our belief in the future," he says.

■ **Create opportunities for your staff** to do interesting work and to learn new things — and give them recognition for it. North Carolina State restructured its IT group to include the position of "subject expert," an IT worker who becomes knowledgeable in a business or academic function and software.

— Julia King

we're talking about being creative and having to teach the technology leadership and agency department heads a lot about security."

But Arlington County's fortunes have changed in the two years since Jordan became CISO. Most notably home to Arlington National Cemetery and the Pentagon, the county not only has a plan and a program, but Jordan also personally ensures that there's buy-in and, more important, an understanding of security needs up and down the chain of command.

"Every new employee in the county gets to meet me," says Jordan, adding that the nation's most densely populated jurisdiction but smallest county by land area doesn't have a full-time IT security staff. "I consider every employee a staff member," he says. As such, he empowers them to take ownership of security.

"I can handle securing the network, but if I can hook them in by teaching them how to lessen their pain when something happens, I can make cyber-

security an effective skill that's useful in their personal lives as well," he says.

Jordan's approach is also having an effect up the chain of command. "I have an agreement with the chief operating officer that if things look really ugly, I pull the pipe," he says. "I don't have to ask."

Command and Control

That's the same kind of balance that David Bauer, Merrill Lynch & Co.'s first vice president and chief information security and privacy officer, has to contend with. "Now the [security] leadership has to have both kinds of expertise," says Bauer, referring to the ability to both link regulatory requirements to IT actions and programs as well as command daily security efforts.

"In the past, the security team was like an auditor," he says. "Now they're more visible. You're expected to have at your fingertips at all times what's going on in the world and the state of your defenses. It's like being a national security adviser. It's no longer accept-

ed to say, 'I'll get back to you on that.'"

How does Bauer do it? "I make decisions, to prevent apathy from developing," he says. "I coach, to ensure play is crisp and focused. I learn, so that I can understand what's new and avoid mandates. . . . And I provide air cover, so that the team can develop ideas and bring the good ones to fruition."

Providing air cover is something that John M. Gilligan is familiar with. In fact, one of his first jobs as the CIO of the U.S. Air Force was to find a way to modernize a complex system of networks used to manage military forces around the world. The IT acquisition and fielding efforts for that program alone cost \$100 million per year. Today he oversees a multibillion IT program — many times larger than even the biggest corporate enterprises.

But in an organization as large as that of the Air Force — with 110 bases, 500,000 users and 10 CIOs at major commands who report to Gilligan — sometimes peer pressure can be a valuable tool to not only gain consen-

sus, but also to simply get things done.

In fact, when Gilligan led an effort to consolidate Air Force servers and networks, the cultural resistance was significant, he says. So he developed metrics for measuring progress and held quarterly reviews with the CIOs where their efforts were presented to the group. No CIO whose organization isn't pulling its weight wants to face a room full of CIOs, he notes.

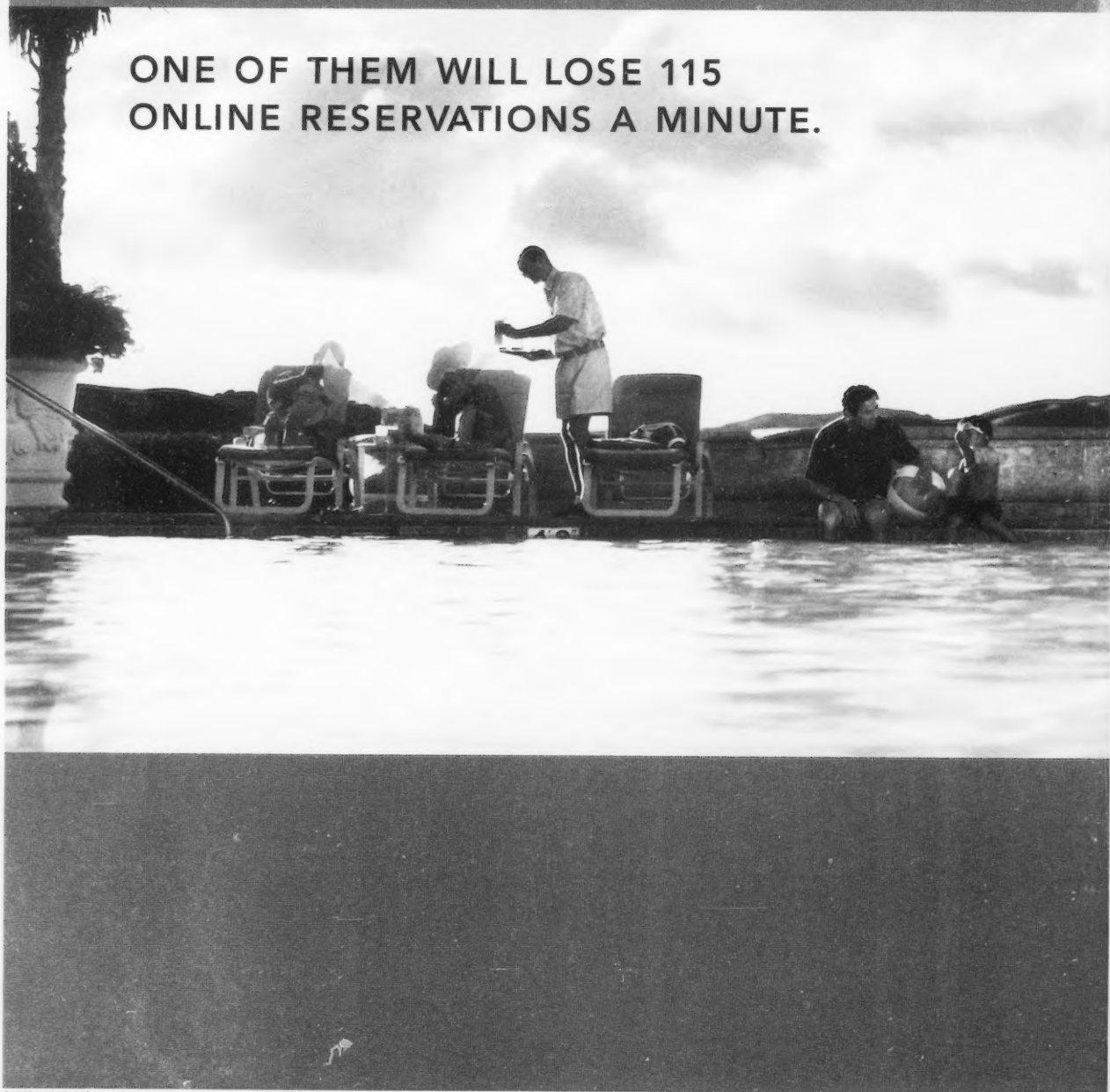
"The peer pressure of the visible metrics served to motivate the commands to accelerate progress," says Gilligan. "I find that if I can challenge my staff with a good description of the end goals or vision, then they can usually provide innovative ideas on how to achieve the goals."

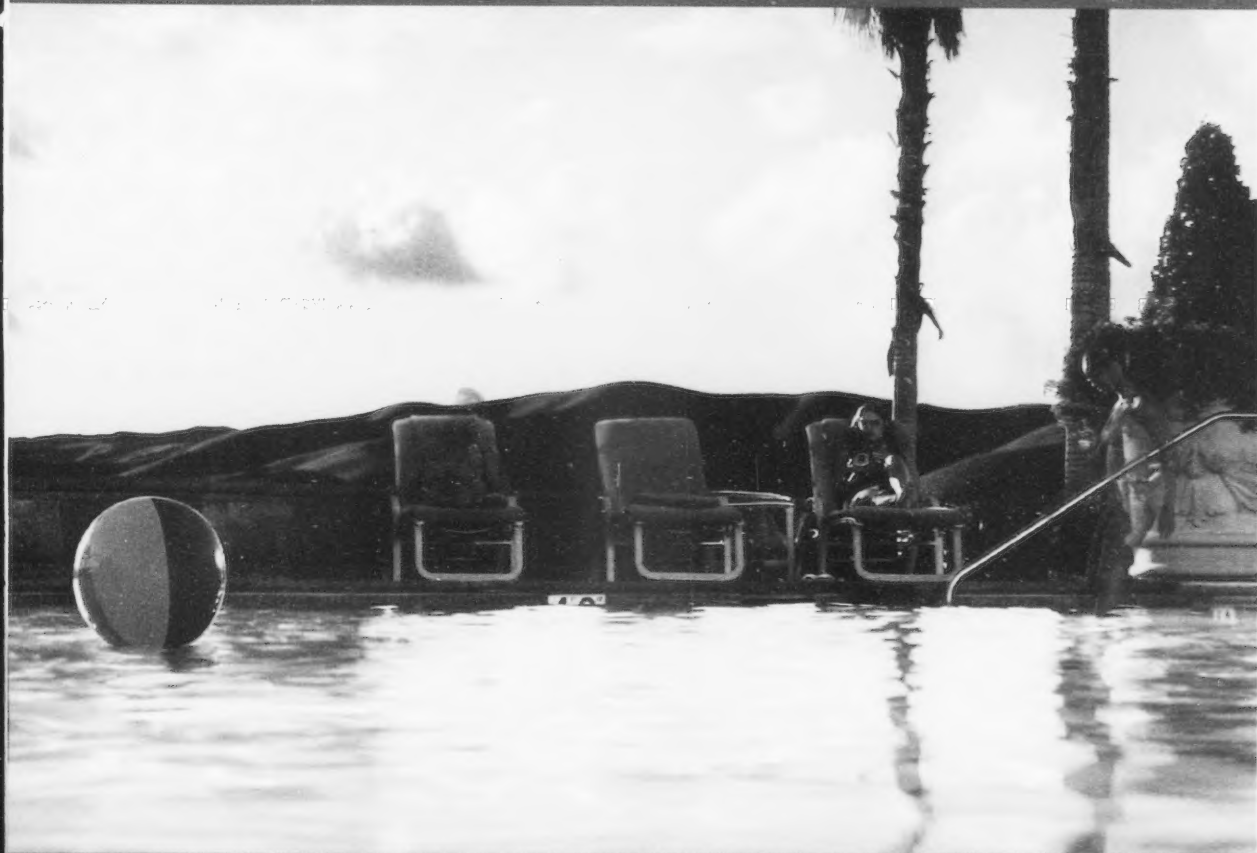
But is real change possible through effective leadership? According to Jordan, people can make a difference if they're given enough time and leverage.

"I used to think it took 10 years to change a culture," says Jordan. "Now I think you can do it in two to three years. That's what one man can do." **43205**

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"My job is part political and part visionary and part orchestra leader," says CTO PHILIP J. BRODY.

Partners

To minimize risk in choosing technology and vendor partners, Premier 100 IT Leaders communicate frankly and adhere strictly to agreed-upon strategic plans.

BY MATT HAMBLEN

THE STAKES ARE HIGH when choosing technologies and vendor partners. Get it wrong, and sales can tank or projects can fail. Pair that decision-making responsibility with the ongoing constraints on budgets, and IT executives say the task of picking the right technology or the best vendor is an enormous weight to bear and requires meticulous evaluations.

Several of this year's Premier 100 IT

Leaders say they minimize that risk in several ways. Frank communication with staff and vendors at the outset and strict adherence to agreed-upon strategic plans are the cornerstones of this process. Also, a willingness to seek outside help or partners for all or part of a development or implementation process is key.

Here's what these IT leaders had to say about the risky process of partnering up.

Put Communication First

IT executives say good communication starts by establishing an overall process that includes frequent meetings and even takes into consideration the word choices they make when speaking with vendors and decision-makers.

"My job is part political and part visionary and part orchestra leader," says Philip J. Brody, chief technology officer of Nevada's Clark County School District in Las Vegas. With 289 schools, it's the sixth-largest district in the U.S.

In 1999, when such a decision had an "extreme element of risk," says Brody, the district navigated the complex political process of rolling out a Gigabit Ethernet WAN. The \$16 million network is expected to reach 130 of 300 sites this month and to support the district's 268,000 students and 30,000 teachers and staff.

"The biggest lesson I learned in this process is persuading people to buy in to the project. Once they have buy-in, they can be counted upon," says Brody.

Part of the project's success can be attributed to a steering committee that has met twice monthly from the start and has experienced minimal member turnover. The committee has helped stem the flow of unpopular decisions from the top, Brody says.

At the project's inception, the committee talked about requests for proposals and technologies and decided to implement a two-year demonstration project of the network. Now the members meet regularly to discuss the roll-out and any accompanying problems that crop up.

Shift Some Burden to Vendors

Don Buskard, senior vice president and CTO at AXA Financial Services LLC in New York, also puts an emphasis on communication. When talking with vendors, he says, "I don't ask for the world. I describe what I'm asking for and why, explaining what the impact of the decision will be."

In recent months, AXA has been evaluating and conducting lab tests on tablet PCs from several vendors, with the prospect of rolling out as many as 7,000 over two years to its field sales force, Buskard says. Battery life is currently only two to three hours on the tablet PCs, but Buskard wants three to four hours per battery so sales associates need carry only two relatively heavy batteries to make it through a day in the field. He says he has been meeting "pretty regularly" with all the vendors about battery life and other issues, "shifting the burden . . . back to

them so the risk doesn't shift to the sales associate."

Buskard may well get his wish within two years if he persuades vendors to decrease the power requirements for the chip set his operation requires. "I try to give vendors information that helps them understand why what I'm asking for is important," he says.

Plan Well, Partner Well

Good planning also reduces risks in picking vendors and technologies, especially when IT executives can rely on strategic plans and widely agreed-upon architectural blueprints.

Michael J. Ashworth, managing director and CIO at J.P. Morgan Chase Investment Bank in New York, for example, says he and his management team have adopted a "commercial decision-making" philosophy in the past two years that challenges his team to decide whether there is anything it can buy rather than build.

In the past year, the bank has adopted that philosophy in partnering with Platform Computing Inc. in Toronto. The software provider is building mid-ware for the bank that handles the distribution of risk management calculations from as many as 40 end-user applications to the bank's compute backbone, Ashworth says.

Platform Computing brought the tool kit, and the bank developed code around distribution. "It's a melding of us both," Ashworth says. "What we could buy wouldn't have solved our problem here. This solution is a hell of a lot cheaper than buying a box-by-box solution."

DHL International Ltd. in Scottsdale, Ariz., has consolidated several data centers in the Americas in the past 18 months while at the same time rapidly expanding through the acquisition of Airborne Express and other companies. Those changes have mandated a new vision that relies on outsourcing "tens of millions" of dollars in development work to Infosys Systems Ltd. in Fremont, Calif., says DHL CIO Steve J. Bandrowczak.

The choice of outsourcing partner was complex and required decision-making skills similar to those involved in selecting a particular vendor or technology, Bandrowczak says.

"Whether you manage internal or external resources, good leadership and project management make the difference," he says. "If you paint a vision and articulate it to your teams what the vision is, it's much easier for everybody to accept the tactical pathway to get there." **42866**

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Competition

Quickly recognizing customer needs and using existing technologies to meet them helps these Premier 100 IT Leaders stay a step ahead of rivals.

BY PATRICK THIBODEAU

ONE OF THE MORE DIFFICULT and risky jobs of an IT leader is to use technology to create a competitive edge. A wrong move can cost a company money, its reputation and market share if a rival gets it right first.

To minimize such risks, top CIOs

develop processes for nurturing new ideas in their companies and recognizing the good ones. They look for technologies they can leverage across the organization. They investigate the latest whiz-bang software and hardware but usually place their bets on extending and improving existing systems.

At Gap Inc., for example, leveraging technology means using existing technology — fast networks and Web access — and applying it to point-of-sale systems to improve the retailer's customer service.

American Express Co. also operates on the principle that the best new technologies are those that take advantage of existing systems. For instance, the company is linking an express payment system to a device that attaches to a customer's key chain. The system is built, in a Lego-block fashion, atop Amex's existing infrastructure.

At Bank One Corp., having a competitive edge means understanding

that near-perfect IT service delivery, as in the case of Web site availability, isn't good enough. The key is to keep focused on customer impact.

Tune In to Customers

As important as technology deployment is in gaining a competitive edge, CIOs say that having a good process in place for identifying customer needs early and then developing technological solutions to meet those needs is at least as important.

Technology "has to have a clear and compelling business value for us," says Dave Ruby, senior vice president of information resources shared services at Marriott International Inc. in Washington. "We don't want to be testing a lot of bleeding-edge technology with our guests."

For Marriott, competitive advantage means identifying customer needs early. *Competition, page 32*

Outsourcing

It's one of the most politically charged decisions an IT leader can make and equally fraught with risk. Here's how Premier 100 IT Leaders avoid the hazards of outsourcing.

BY JAIKUMAR VIJAYAN

JOHN GOLDEN doesn't have to look very far to see just what can happen when an outsourcing project goes awry.

As CIO and executive vice president at \$13 billion CNA Financial Corp. in Chicago, he had to pull the plug last March on a \$20 million application upgrade project that an Indian firm was working on, because it wasn't delivering the expected cost or performance benefits.

"We weren't getting any value at all for the amount of money we were spending," Golden says. "I was going to end up with a system that had no additional functionality from the one we'd had since 1994."

His decision to kill the massive project is emblematic of the tough choices IT leaders face when farming out technology work. Yet the substantial cost benefits and flexibility that outsource-

ing promises have resulted in a sharp rise in the number of jobs being handed over to third parties. In fact, 31% of this year's Premier 100 IT Leaders reported an increase in their contract-labor budgets (by 19%, on average).

The trend toward outsourcing requires IT executives to apply their leadership smarts in a variety of sticky situations. Here are some of their tips on everything from how to cope with choosing vendors and negotiating contracts to laying off employees and dealing with shattered morale.

Choose the Right Vendor

Outsourcing is a long-term relationship, and choosing the right vendor is crucial to meeting your technology, business and financial objectives, says Martin Cole, global managing partner of outsourcing and infrastructure delivery at Accenture Ltd. and a 2003

Premier 100 IT Leader honoree. As both a provider and customer of outsourced services, Cole says you should base your decision on a vendor's industry knowledge, technical competency, financial solvency and service-delivery infrastructure.

"The biggest success factor is picking the right vendor," agrees Robert W. Reeg, senior vice president of systems development at MasterCard International Inc. "You've got to have a partner that you feel you can trust."

And justifying outsourcing involves more than just looking at the cost benefits, says Timothy C. O'Rourke, vice president for computer and information services at Philadelphia's Temple University. The university recently hired a consulting firm to help it decide whether to outsource its telecommunications and data network operations, which are now handled by a 40-person staff. Outsourcing would probably result in lower overall service quality and would be unlikely to deliver much cost savings, says O'Rourke. But the move would let the school more quickly access and absorb new telecommunications technologies, he says.

For some companies, the outsourcing decision might hinge on lowering the cost of maintaining legacy code or quickly gaining expertise in specific areas through partnering, Cole says.

But simply ensuring that an outsourced project delivers on the promised benefits can be a huge task without proper oversight, Reeg says.

According to Golden, CNA's upgrade project failed because there wasn't anyone in a "position with clout" in charge of the relationship who understood the technology and the business process. The vendor "was never positioned to be successful," he says.

The key, Reeg says, is to assign clear ownership and accountability for a project and ensure that appropriate processes exist to measure results regularly. When it comes to outsourcing, "you get what you inspect, not what you expect," says Reeg, whose philosophy has taken him to MasterCard's India development center at least 14 times in the past four years.

The loss of jobs that sometimes results from outsourcing decisions can be a particularly sensitive issue.

Outsourcing, page 32

Snapshot

31%

reported an increase in budget allocated for outsourcing or contract labor (on average, by 19%).

18%

reported a decrease in budget allocated for contract labor (on average, by 14%).

46%

said they saw no change.

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COMPETITION

Continued from page 30

ly. That's accomplished in part by a technology steering committee made up of all the key business units.

Today, broadband access may seem like a standard amenity to offer hotel guests, but it wasn't obvious when Marriott began investigating it more than four years ago. Among the questions it faced was whether customers would need PCs in their rooms or would bring their own laptops. Marriott decided against offering PCs, a choice that turned out to mesh with the habits of its laptop-toting customers. And because it identified the need for broadband early, Marriott got a jump on offering high-speed Internet access.

The chain has already installed high-speed access in more than 1,000 of its 2,600 hotels. "We are significantly ahead of our competition," says Ruby.

"I think timing and speed are very

important — extremely important," says Ken Harris, senior vice president and CIO at San Francisco-based Gap. IT managers can't wait for business units to bring them their problems. "You've got to be out there, on the front lines all the time, talking with your business partners and understanding what their needs are," Harris says.

And competitive advantage is gained not simply from having a particular technology but by the way the technology is used, he says.

"You may have two different companies using the same technology, but using them in different ways, [with] one getting much more benefit and value out of it," Harris says.

CIOs say that acting quickly is crucial to gaining so-called first-mover advantage. New point-of-sale technologies that allow retailers to immediately let a customer buy a product via the Web if it isn't available in the store are avail-

able to all retailers. But while many competitors have hedged and delayed, Gap has moved forward, says Harris.

Know the Business Inside and Out

Moving quickly also means that IT has to understand the business.

Austin A. Adams, CIO at Chicago-based Bank One, says his company offers extensive training to its IT staff on business operations. Companies that can respond best to competitive challenges "are those that best know and understand the business," he says.

For example, even though the company's Web availability, at 99.7%, is nearly perfect, Adams says any downtime is viewed in terms of the number of customers affected rather than IT performance levels. Improving service is key to establishing a competitive advantage, he says.

"We report our performance in terms of negative customer impact," says Adams. "That's what the business people feel — they don't care whether we're 99.7% [available]."

American Express Executive Vice President and CIO Glen Salow says he believes the best solutions take existing capabilities and put them together in a new fashion. For instance, New York-based Amex has developed a travel card that works just like its 100-year-old traveler's check, except that it's reloadable. It has the potential to be a real "game changer" in the industry, Salow says. But the new product is built on existing capabilities. "It's not like we had to go out and create a new traveler's check capability," says Salow.

The point, he says, is that any technology — old or new — may lead to competitive advantage. Although he does concede, "I never found a new use for punch cards." **43365**

OUTSOURCING

Continued from page 30

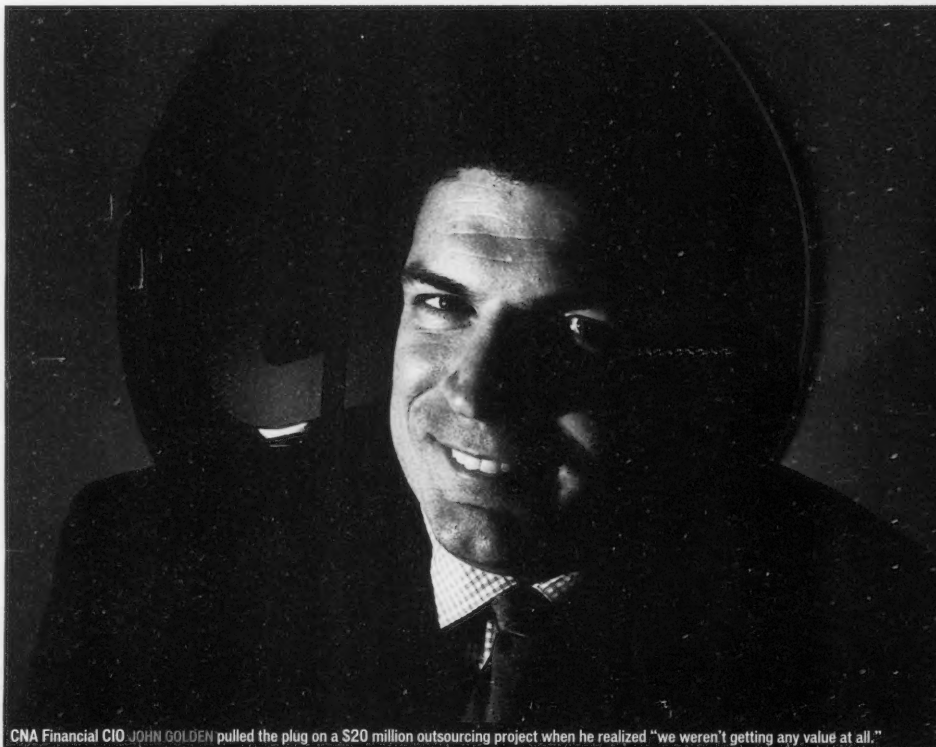
O'Rourke says. Temple hasn't yet decided whether it will outsource its telecommunications operations, but because the university is heavily unionized, O'Rourke says he will pay special attention to minimizing any job losses that may occur.

"It's a huge and very significant factor," O'Rourke says. "It's just something that I will always have to consider throughout this process." Outsourcing can evoke "pure fear" among employees, he says, and wreak havoc with their morale. So the rule in all cases is to be as candid and communicative as possible about what's going on.

If outsourcing makes business sense, adds Golden, job losses are inevitable. But CNA takes steps to help staffers make the transition. Long before any outsourcing decision is made, for instance, the details are communicated in a series of meetings for the IT organization, he says. When applications are being outsourced, employees are informed about new skills and technologies that are important to CNA. They are encouraged to acquire those skills under a company initiative known as "Know IT Now or No IT."

At Temple, part of the assessment effort involves looking at the possibility of getting the outsourcing vendor to absorb the affected employees.

In any case, communication is key to coping with the array of issues that outsourcing can raise. **43109**



CNA Financial CIO JOHN GOLDEN pulled the plug on a \$20 million outsourcing project when he realized "we weren't getting any value at all."

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Tight budgets and heavy workloads haven't extinguished creativity in these IT departments. It's being sparked anew among IT leaders by their very best resource — their staffs. Here are three ways they're driving innovation.

Hiring

Technical training and experience count. But these IT leaders say it's the hard-to-quantify characteristics that seal the deal.

BY GARY H. ANTHERS

AFTER TAKING a long, hard look at commercial CRM packages for use in Humana Inc.'s call center, the company's executives found them too expensive.

Then an IT analyst there came up with a creative solution based on in-house software, a few low-cost purchases and some custom programming.

Bruce J. Goodman, senior vice president and chief service and information officer at the Louisville, Ky.-based health benefits company, says the system "was better tailored to our environment than some of the pack-

ages. And it easily saved us millions."

He describes the analyst-cum-hero who figured it all out this way: "He was a thinking-out-of-the-box, be-creative, take-charge, deliver-what-the-business-needs kind of guy."

That pretty well sums up what Premier 100 IT Leaders look for in their employees. What these honorees evaluate before anything else are factors other than IT experience and technical skills. "We finally have CIOs who are thinking about behaviors as opposed to skills and knowledge," says Linda Pittenger, CEO of Gartner Inc.'s People' Inc. "It's critical for the leader to have an ear on what's going on, or he's going to turn around and there's not going to be anyone standing behind him." Most methods of communication will work, she says, but you need to ask yourself, "What do I want to get out of this? What do I expect out of this?" And likewise, Pittenger says, you need to make sure you can answer the employees' question, "What's in it for me if I participate?"

Hiring, page 38

Communication

IT leaders who encourage feedback foster a frank environment where staff members aren't afraid to speak their minds.

BY JEAN CONSILVIO

WHAT HAPPENS when IT leaders turn to their staffs for innovative and cost-saving ideas? In an IT department where the lines of communication are truly open and working, those IT leaders hear a lot of useful feedback, but they also get an earful on the problems.

"Bad news is good," explains William G. Head, chief technology officer and director of technology at Defense Finance and Accounting Service in Kansas City, Mo., the accounting oper-

ation for the Department of Defense. "It says you've got communication."

And if your staff isn't afraid to speak up, then you've got a channel through which to draw great ideas from all levels of the organization. But how does a busy CIO or CTO maintain a culture where all workers — even those at the lowest levels — are encouraged to speak up and know that they won't be punished for saying what their supervisors don't want to hear? By making time, says one expert.

"I don't care how busy you are," says Linda Pittenger, CEO of Gartner Inc.'s People' Inc. "It's critical for the leader to have an ear on what's going on, or he's going to turn around and there's not going to be anyone standing behind him." Most methods of communication will work, she says, but you need to ask yourself, "What do I want to get out of this? What do I expect out of this?" And likewise, Pittenger says, you need to make sure you can answer the employees' question, "What's in it for me if I participate?"

For Head's IT group of 2,100, which spans eight locations and has been working with a smaller IT budget this year, the incentive is job security. More than one-third of Head's staff members are consultants, who he says are treated as regular staffers. "We don't throw

Communication, page 38



PHOTO: JEFFREY M. HARRIS

WILLIAM G. HEAD says getting bad news from staff can be good. "It says you've got communication."

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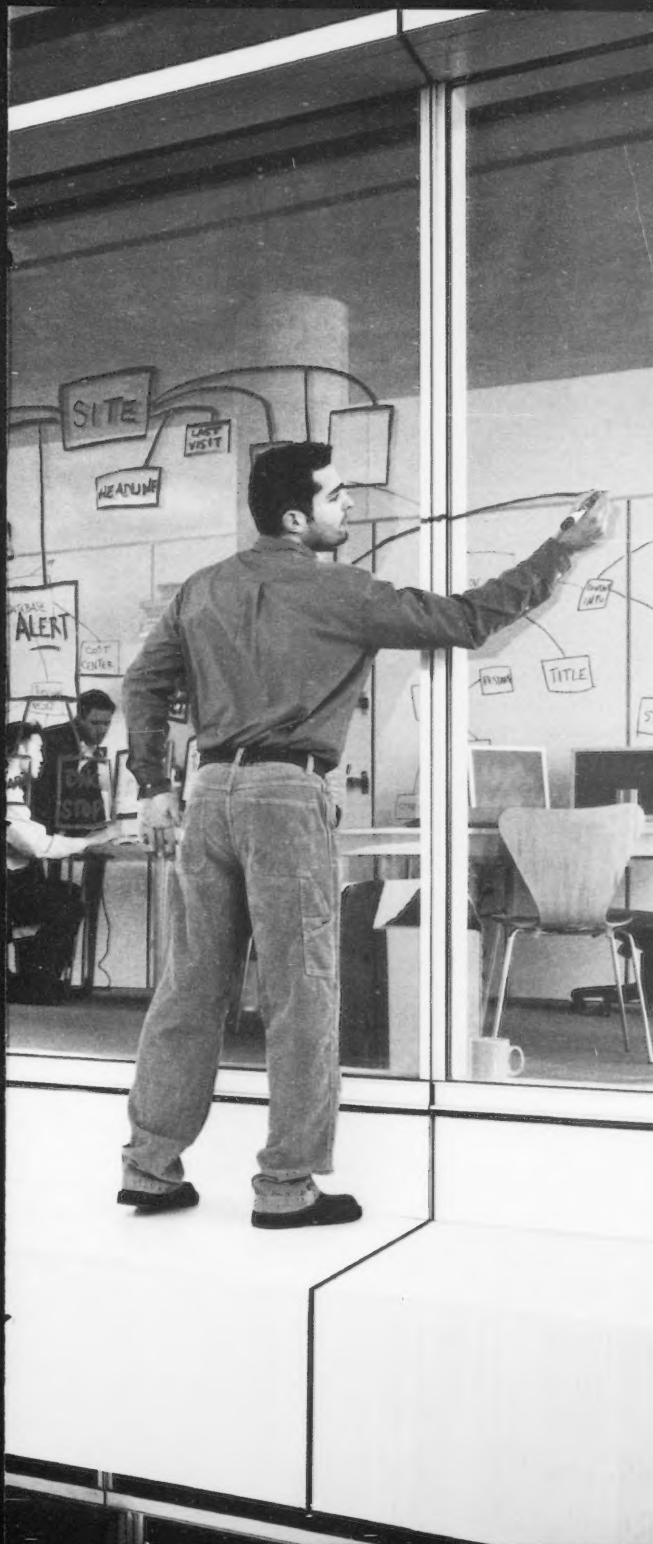
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HIRING

Continued from page 34
tenger, president of People's Inc., a Gartner Inc. company in Bridgewater, N.J. "That's a major breakthrough."

Patrick Clancy, director of IT at The New York Academy of Medicine, says, "I am impressed first and foremost by a person's enthusiasm. I'm not talking about people just being bubbly in an interview, but about someone who really gets it about what IT does for an organization, and being excited about advancing the real mission of the organization. Almost never is the mission IT."

Clancy echoes the sentiments of other honorees in citing creativity as a top criterion when hiring IT recruits. "What creativity really means is taking vague ideas that our users have and turning them into something that is doable and practical from an IT sense," he says. "Those who get the big picture and are enthusiastic and flexible tend to be the ones who come through for you in the creativity department."

Chris Laping, vice president and CIO at GMAC Commercial Holding Capital Markets Corp. in Denver,

Hiring Checklist

IT leaders say they look for candidates who:

- Know how to work well in teams.
- Show enthusiasm for the job.
- Can understand the business mission behind IT initiatives.
- Have a strong work ethic.
- Can think creatively to solve problems.
- Make a good impression with the entire IT team, not just the hiring manager.
- Make a good impression with the IT organization's customers.
- Are highly intelligent and have excellent problem-solving abilities.
- Have relevant experience and education.

evaluates recruits and new hires on five core values: education, experience, maturity, team fit and work ethic. "If you don't exhibit all five of these traits, you won't get hired," Laping says.

Candidates at GMAC are evaluated by six- or seven-person interviewing panels that consist of both IT and business people. The input of the business interviewers is vital, Laping says. "We have a customer service orientation, so it's really important to me that my cus-

tomers like who's here," he adds.

Rob Rennie, vice president of technology and CIO at Florida Community College in Jacksonville, says the most reliable predictor of excellence is IQ. "I don't look for a particular skill set. I look for raw intelligence, problem-solving ability," he says.

Rennie says he's comfortable hiring people who don't have an IT background. "I get people from entertainment and the performing arts," he says.

"They are very much problem-solvers."

Premier 100 IT Leaders who have especially able and productive staffs say they tend to focus on people rather than on job descriptions. For example, Laping says he enlisted the aid of a help desk technician to run cost models for him because the technician had a finance degree and strong quantitative skills. That employee was subsequently promoted to a business analyst position.

But despite the care these IT leaders put into making the right hires, mistakes happen. One hire of Laping's failed later on the work ethic criterion. "This individual didn't think it was their job to service our customers and said, 'It's not my job to be a service person.'" Indeed, soon it was not his job.

"The biggest mistake you can make is to find someone you like but the team doesn't embrace that person," Laping says.

Haste isn't helpful, Clancy says. "The biggest mistake that I've made that's come back to bite me was being in too much of a hurry — being in a hurry to sign someone before someone else does." **42925**

COMMUNICATION

Continued from page 34
things over the partition to them," he says. "I expect them to bring good ideas to the table, just like our employees would internally." His staff has grown to accept that.

At Lincoln Financial Group in Philadelphia, Jason Glazier, senior vice president and chief technology and e-commerce officer, rotates members of his 800-person IT staff in and out of two groups established to drive innovation. The groups keep tabs on what works and what needs improvement across the company's divisions. The IT Advisory Counsel comprises Glazier, the divisional CIOs and IT auditors.

Glazier is also executive director of the Architecture Committee, which includes lower-level employees who understand the technology details and can recommend subject-matter experts to join smaller groups of up to four to eight people for brainstorming meetings and conference calls.

"I'm very supportive of people self-educating. If you're going to truly be great at what you do, you're going to be constantly trying to educate yourself more," whether it's by jumping into new opportunities at work or pursuing education on the side, Glazier says.

Regularly attending both groups' meetings keeps him in touch with his

Talking Tips

- Create a culture where employees aren't punished for saying what you don't want to hear.
- Appoint meeting and group leaders whom the staff perceive as credible and trustworthy.
- Get staff to communicate from the bottom up. This takes the leader's effort.
- Be able to answer this question, for everyone invited: "I have work to do. What's in it for me if I attend?"
- Ask yourself: What do I expect to get out of this communication vehicle?
- Schedule brown-bag lunches. They work best with people of similar levels.
- Establish an incentive program: "If you give me X, I'll give you Y."
- Hire a communications person to help ghost-write corporate memos and set up meetings and agendas. It's your responsibility as a leader to make time to communicate.

large staff. "That's where I spend a lot of time — making sure that we make good decisions," says Glazier.

What comes out of group meetings and brainstorming sessions depends on the track record of the leader: Can he make people feel comfortable enough to speak up in front of their peers and direct managers? "Research tells us that managers tend to hang around and listen to people who are like themselves," says Pittenger. "It's harder for people to want to listen to ideas from people who are very different from them."

Michael Moon Sr., CIO and global vice president of information services

at Haworth Inc. in Holland, Mich., has had success with brown-bag lunches. He schedules time every few weeks to pull together 10 to 12 workers — a mix of infrastructure and process people and developers — from his 175-member IT staff for an informal feedback loop. "It usually tends to create ideas in different areas," he says. For example, he's been able to consolidate servers, save costs using voice over IP and introduce an application development method.

And even though the office furniture manufacturer has a program that rewards people who come up with cost-saving ideas, Moon says he looks at

other ways of keeping his staff involved in innovative thinking. Some IT employees who attend user conferences have to "pay their way," he says, by coming back with ideas that generate savings greater than what it cost for them to go to that conference. Others are required to submit trip reports or, depending on their job level, are asked to make presentations at meetings.

"Those drive ideas as well," he says. Moon also holds all-hands meetings and technology briefings on specific topics. And he invites companies, like his e-procurement vendor partner, into the office to brainstorm with members from his process teams, which he calls "internal consultants," who make up about 12% of the IT staff.

Occasionally, workers bring up so many valid issues in a meeting that a decision is made to not move forward, which might be disheartening or confusing to employees. "A lot of that is based on the quality of the person running the subgroup," says Glazier. "If people really can't agree in the subgroup, then they can escalate it to me, and I'll decide."

Whichever strategy a leader chooses to communicate with his staff can work. But it's the leader's responsibility to make it succeed, and that boils down to how much value is placed on hearing what people have to say. **43050**

Motivation

These IT leaders keep staffers upbeat during lean times by targeting what drives them: technology and training.

BY THOMAS HOFFMAN



JUDI ZITO says she gives her entire Miami-Dade County staff opportunities to work on new projects.

WITH A LIMITED BUDGET in 2000 for Microsoft MCSE certification and 20 network-working staffers to train, Miami-Dade County CIO Judi Zito took a chance on a proposal she hoped would fly with an IT staff that is passionate about technology.

Because the county couldn't afford to send everyone to class at once, Zito asked her team if they would be willing to take the training at night, after work. Their reaction? "They jumped at it," recalls Zito.

That willingness to give up personal time in a quest for learning is a sign of the importance that IT professionals continue to place on technical training. While many IT shops have had to endure three straight years of cost-cut-

ting and, at best, marginal pay raises, savvy IT executives have learned to get creative about keeping enthusiasm running high. Their advice? Target the two things that motivate IT people most: technology and training.

Encourage Cross-Training

Like other technology companies that have been ravaged by lower IT spending, Palm Inc. in Milpitas, Calif., has had to make deep staff cuts throughout the organization — including IT. Palm has endured five rounds of layoffs over the past two years, slashing its IT staff from 168 to 57.

The upside, says Vice President and CIO Marina Levinson, is that the workforce consolidation has created new opportunities for the remaining IT workers. "On the business application

side, we've invested quite a bit to cross-train our people and provide them various training opportunities for new skills and give them new functional experience," she says.

Each quarter, Levinson and her lieutenants evaluate the technology skills of Palm's IT staff and then offer employees a chance to train in areas where there are knowledge gaps. As part of the staff consolidation, Palm merged its ERP, CRM and data warehousing teams and allowed people to cross-train in those disciplines, says Levinson.

Zito has taken similar steps to keep Miami-Dade's 600 core IT staffers engaged. For instance, she makes sure that all IT employees get a chance to work on new projects — albeit sometimes on a part-time basis.

The approach, says Zito, "allows people to progress professionally, and that's been very well received."

It's a trend that seems to be catching on. Many IT departments have been shedding contractors and consultants and giving a growing proportion of work to internal IT workers, notes John Parkinson, chief technologist for the Americas region at Cap Gemini Ernst & Young U.S. LLC in Chicago. The approach "has been somewhat of a morale booster, allowing IT people to work on new projects rather than hack away at the old stuff," he says.

Help Develop Careers

Robert Wischnowsky, chief technology officer and managing director of global technology systems at FleetBoston Financial Corp. in Providence, R.I., recognizes the importance of keeping his 1,100 staffers motivated during tough times. "When the market comes back," he says, "these top individuals can go anywhere for jobs."

Wischnowsky has taken steps to help foster the career development of the bank's IT staff. FleetBoston is currently piloting an online workforce development system where IT workers can view which requirements must be met to be promoted to the next job grade, such as training and certifications.

In addition, Wischnowsky spearheaded a front-line management training program for newbie managers. "A lot of people get promoted into management roles because of their technical capabilities, but there hasn't been enough done in our industry to give them management training," he says.

One of the more innovative programs Wischnowsky launched last year was a leadership development class that's aimed at helping technologists "change

their behaviors" and take different approaches to problem-solving. Wischnowsky met with the group of 10 staff members each month and gave them additional assignments — books to read and organizational exercises to carry out with fellow staffers. Topics included interpersonal skills, workplace diversity and respecting different points of view.

Five months after the program finished last spring, Wischnowsky held a reunion with the class. Says Wischnowsky, "They're still applying some of the things they learned, mostly from each other." **Q 42851**

Ideas in Action

Good managers know that it takes meticulous follow-through to ensure that good ideas become reality.

For some IT leaders, like Kamal Narang, it starts with creating a culture that puts workers at ease about pitching suggestions. "I personally like to treat my employees as colleagues, and that helps make them comfortable in presenting these ideas," says Narang, chief technical officer at Capital Technology Information Services Inc., a Rockville, Md.-based systems integrator.

If it's a new project idea, Schneider National Inc.'s Robert Grawien will make sure the idea is debated both by IT and business unit managers at project review meetings, "regardless of the source," says the vice president of application development at the Green Bay, Wis.-based trucking firm.

If someone in the IT department at Miami-Dade County has a worthy idea, "we'll authorize a pilot for it," says CIO Judi Zito. She points to an assistant IT director for the county who suggested putting more legacy-bound information online through a Web services approach, such as making property data accessible to both the building and police departments. The idea was well received, and a pilot was launched about six months ago, says Zito.

— Thomas Hoffman



Juniper Networks CIO KIM PERDIKOU says she had to overcome "a lot of emotional, it-can't-be-done thinking" during a merger.

SETH AYOUBIAN

Avoiding PROJECT PITFALLS

IT leaders face down the same challenges you do, every day. Here's how they disarm common project-busters. BY STEVE ULFELDER

YOU ALREADY KNOW that a million things can go wrong with an IT project. And you can probably name the most common culprits off the top of your head: unclear expectations, lack of executive sponsorship and scope creep.

This year's Premier 100 IT Leaders have faced those same project-busters — and have defiantly overcome them. Here's a look at how they recently tackled some projects that combine massive breadth and complexity. Although the hurdles they encountered were common, the ways they cleared those hurdles were often imaginative.

Problem: It can't be done.

Solution: Stay calm and analyze the risk/reward ratio.

In 2003, router vendor Juniper Networks Inc. completed its purchase of Unisphere Networks Inc. for approximately \$740 million. It was a complex transaction: It involved a distant company (Juniper is based in Sunnyvale, Calif., while Unisphere had headquarters in Westford, Mass.) that was part of a global enterprise (Unisphere was a Siemens company) and had a vastly different culture.

When it came time to integrate the two companies' IT systems, Juniper CIO Kim Perdikou set goals that flabbergasted many. By Day 1 of the official merger, Perdikou wanted to have a unified public Web site and full voice-mail-forwarding capabilities. By Day 30, she wanted all customer-facing technologies, such as invoicing, to be integrated. And she expected the remaining back-end systems to be unified 90 days after the papers were signed, so the company could move forward in its next fiscal quarter.

"The Juniper [IT] people believed we could do it," Perdikou says, "but the new [Unisphere IT workers] who came into the company weren't sure. ... There was a lot of emotional, it-can't-be-done thinking."

Bill Yates, a project management instructor at Boston University's Corporate Education Program and a certi-

fied project management professional, calls this reaction "glandular decision-making" and says the way to counter it is to glean as many facts as possible.

Perdikou agrees. "Basically, you have to talk through each problem and get to specifics," she says. Juniper had 10 integration teams, each charged with handling different technologies. Each time a team raised objections about the aggressive schedule, Perdikou (as the overall project leader) calmly asked for a list of business risks associated with the rapidity of the project. "As soon as you analyze the risk/reward, you're actually taking the emotion out of it," she says. "Now you're just studying a business problem."

In nearly all cases, Perdikou and the team leader agreed that the risk was worth taking. The result: a fully unified IT program one quarter after the buyout became official. "A lot of people thought it was impossible," Perdikou says — calmly.

Problem: it's never been done.

Solution: Break it down into digestible components.

Steven Sheinheit, senior vice president and chief technology officer at MetLife Inc., spent much of 2003 creating a data utility — the first component in an ambitious utility computing environment planned for the New York-based financial services company. The shared environment for database servers established a repeatable process for acquiring database resources and offers a pay-for-use model, allowing MetLife to decrease its number of stand-alone servers and reduce operating expenses.

Because utility computing is wild-blue-yonder territory, Sheinheit says he approached the project by breaking it down into other more manageable endeavors. "There are certain things you have to do to succeed at any demanding project," he says. "The first is to grab people's minds and imaginations and sell the concept" to senior management and the company as a whole.

Once the concept is sold and the initial investment made, Sheinheit says, it's critical to maintain the momentum

by building a prototype as soon as possible — especially when the project is difficult to grasp, as utility computing is for many. "You're spending money here," he says. "You've got to show quick results."

Murray Horwitz, CIO at Uline Shipping Supplies in Waukegan, Ill., agrees. "I've always been a prototype proponent," Horwitz says. "Take a month, invest some money, help [executives] understand the investment. A year's too long to wait."

Problem: Territorialism among business units.

Solution: Call in the big boss — in this case, the governor himself.

It's no secret that broad IT projects — ones that require departments or business units to set aside their self-interests and cooperate — have a much better chance of succeeding when they're championed by top business executives. Nobody knows this better than Gregory S. Jackson, who helped write a white paper on the topic when he worked at IBM.

Now CIO for the state of Ohio, Jackson saw a practical application of the rule last year. He was launching a Web project that came to be called the Ohio Business Gateway — a single Web site designed to streamline processes for small and midsize businesses. Jackson had heard business owners' complaints that to conduct common online transactions — which included filing for workers' compensation, unemployment

ment insurance, employer tax withholding and sales tax — they had to visit Web sites run by four state agencies, each with its own interface.

Determined to create a single site for these transactions, Jackson met with representatives from Ohio's Revenue Management Department, Job and Family Services Department, Commerce Department and Bureau of Workers' Compensation. Right off the bat, "territorialism was big," he says. Jackson declines to explain exactly how this conflict became apparent but says, "We knew right away we'd need executive sponsorship from the governor's office" to make the gateway happen.

Sure enough, Gov. Bob Taft himself made it known that he wanted the Ohio Business Gateway to succeed, and Tax Commissioner Thomas M. Zaino (who has since left that position) sponsored the project and led meetings. The heavy hitters' involvement persuaded the agencies to set rivalries aside. The project was completed on time and has been an immediate success: State figures indicate that the self-service site has cut the time required to complete transactions by 36%, and Ohio's transaction cost is down a whopping 42%.

These Premier 100 IT Leaders demonstrate that even the most daunting project-management pitfalls can be overcome through execution, communication and innovation. **43075**

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Don't Try This at Home

As an IT consulting, outsourcing and services company, Perot Systems Corp. regularly advises its clients to implement large projects in stages in order to avoid the business disruptions and culture shock that often come with "big bang" deployments.

So Michael McClaskey, CIO at Plano, Texas-based Perot, seems a bit sheepish when he talks about a massive internal Perot project that included a complete re-engineering of human resources and finance back-office processes, plus a PeopleSoft 8 implementation. "We went live with 12 modules simultaneously in 11 countries on April Fools' Day," McClaskey says. "We called it our 'don't try this at home' project."

Myriad factors prompted the company to ignore its own advice and go for an ambitious big-bang cutover. Because the re-engineering involved a whole new method of accounting, it had to go live at the outset of a quarter.

Interestingly, McClaskey also felt a need to "put a stake in the ground" in order to avoid another project pitfall: scope creep. "Scope didn't just creep in but poured in [on the project] because it touched so many business units," he says. "We could have continually rethought and rearchitected without ever deploying." The lesson: Sometimes you've got to choose among risk factors.

— Steve Ulfelder

IT Agenda 2004

Which technologies will IT Leaders put to the test this year? Here's a look at the four they say are most promising, plus an inside look at how these leaders separate product hype from reality.

BY MARY BRANDEL

FOR TODAY'S technology leaders, IT not only matters — it can also make or break a company's competitive advantage. Even with the tight economy, this year's Premier 100 IT leaders vehemently disagree with those who equate information systems with commodities such as electricity.

"We consciously keep an eye on the horizon and categorize the technologies as those in which we want to lead, those we want to keep pace with and those we want to follow," says Jean Delaney Nelson, vice president and CIO at Minnesota Life Insurance Co.

For instance, the St. Paul-based company chose to be a leader in computer/telephony integration, and "it's given us serious competitive advantage," she says. In fact, this year, Minnesota Life has moved up a notch to eighth place in terms of largest group sales in the U.S., and "the reason we're doing so well is our technology edge," according to Delaney Nelson.

It's not easy to keep track of the well-hyped and seemingly endless march of new technologies, and to that end, these IT leaders depend on advisory groups, steering committees and domain experts for reality checks.

"We give vendors 30 seconds to convince us how their technology will pay for itself," says Ben Harris, deputy sec-

retary of operations and technology at the Florida Department of Children & Families in Tallahassee. "If I buy something, it has to help me cut costs in another area. That shrinks the field pretty quickly."

The job is particularly difficult in today's slashed-budget economy. "The opportunities for pursuing the different possibilities are definitely reduced," says Joe Drouin, vice president and CIO at TRW Automotive Inc.

For instance, a skunk works group at Livonia, Mich.-based TRW that experimented with new technologies has been disbanded. As a result, "we have to be really sure that we're not just chasing technology down a dead-end street," he says. "We put a lot more effort into ensuring that what's going to come out will have a clearly defined impact on the business."

Keeping one eye on the horizon and one on current business needs while also considering budgets, your infrastructure, what's hype and what's reality — never mind the pressures from business people to pursue various technologies — "it can be very multidimensional," says Lyn McDermid, senior vice president and CIO at Dominion Resources Inc. in Richmond, Va.

Certainly, this is no time for entertaining what McDermid calls the latest "toy du jour." It's increasingly impor-

tant for IT to take a lead role in knowing what's ahead "so you can say no as much as yes," she says. "It's understanding what's on the horizon so you can make a good business decision as to whether to go there at all."

With that in mind, here are the top four technologies Premier 100 IT leaders say they'll be watching closely in the coming year:

1 Wireless

When you're in an organization with a lot of mobility, wireless technology makes a lot of sense. But you can also hit a breaking point when "wireless for wireless' sake" is just not worth it.

That's the challenge McDermid faces at Dominion Resources Services, a business unit of the huge energy company. Dominion Resources began doing off-site meter reading three years ago and plans by the end of 2005 to read all of its meters remotely, using radio frequency identification technology, as well as cellular signals sent directly to its databases. The company has also installed mobile computers in all of its service trucks so it can send work orders and receive status updates via satellite. "It's all about speed, and that's what wireless does," she says.

The company is more cautiously ex-

ploring wireless LAN technology to allow more efficient information-sharing within its offices. "We're piloting it to see whether we really save money," McDermid says. It takes a similar approach to BlackBerry devices. "A lot of people do not need immediate access to e-mail and calendars," she adds.

The University of Notre Dame is investing in wireless to support its mobile faculty and students. It's using 802.11b access points in its buildings, as well as switch/antenna technology from Vivato Inc. for its green spaces.

For off-campus students, the school has partnered with Motorola Inc. and local Internet service providers to offer secure wireless access at broadband quality to the campus network.

"It's a competitive thing, but we also recognize that student and faculty expectations are higher than in previous generations," says Gordon D. Wishon, CIO, associate vice president and associate provost for IT at the Notre Dame, Ind.-based university. "We're hopeful that we can give them access to educational and research material from any location on the campus."

2 Web Services

Sometimes, having a limited budget can be advantageous. For Harris, restricted funds required him to find an inexpensive way to integrate data from disparate mainframe systems at 15 sites throughout Florida for his and six other state agencies.

The agency is an early adopter of Infravio Inc.'s Ensemble Web services management suite, which uses Web technology to access multiple databases with a single query. The system is expected to be fully deployed in a year.

"In many ways, this initiative was driven out of crisis," Harris says. "We weren't going to get appropriation dollars to encode a data warehouse type

of environment." Now, he says, "if I'm a social worker, and I'm going to someone's house to determine if a child has been abused, I can look at the Medicaid data to see if there's a pre-existing health condition. Or I can access criminal history data to know if it's a high-risk situation." In the past, Harris says, social workers had to wait to get this information.

So far, the Web services system is much less costly than a data warehouse approach. "We've probably spent \$100,000 in salary dollars in coding and development," Harris says. The system has also become the main driver of the department's IT strategy, since it plans to convert all 150 of its applications to a Web services model.

Harris acknowledges that Ensemble, as a new technology, carries some risk. "There are no real standards," he says. "But even if we just use it for 12 months, it is worth every penny."

3 Business Intelligence

Notre Dame also plans to hone its competitive edge through business intelligence.

Wishon is working with SCT Corp. and Business Objects SA to build a data-warehouse-based business intelligence system that will supply the university with data to grow its academic and research programs.

"Our legacy administrative applications really present barriers to extracting useful, accurate data and compiling it in ways that are useful," Wishon says. This includes data on student demographics and performance, financial aid and the success of the university's academic programs and research.

Students and faculty would also get exposure to the latest business intelligence tools. "Using the latest business intelligence technologies to better manage competitive positioning is fairly new in higher education," Wishon says.

TRW Automotive also wants to improve its business intelligence capabilities. It wants to provide sales and marketing executives with customer information gleaned from its heterogeneous mix of back-end systems more quickly than the four days it currently takes.

With today's fierce competition and heightened customer demand, Drouin is being asked to produce customer information that cuts across these

systems. "If someone wants to know total sales to a particular customer last month worldwide, it's a manual effort," he says.

TRW Automotive is exploring data warehouse technology or Web services for the back end, with business intelligence reporting tools on the front end. "I'm looking for something that will give us the biggest bang for the buck, even if we have to compromise," Drouin says.

But Drouin says he feels he's ahead of the game so far. "I don't know another CIO in a Tier 1 automotive company that has harmonized its back-end systems," he says. Plus, his group is the one that identified the need for this type of system. "Before I have a sales guy storming in and demanding this type of system, it was a great instance to proactively say, 'Here's a set of new tools to make this process more efficient for you,'" he says.

4 Grid Computing

Grid computing has been used by scientists for many years, but commercial applications are still rare. In this computing model, a central-

ized server distributes a processing job to unused cycles on other machines and monitors and manages the completion of that job, thus achieving one big virtual computing resource.

When Delaney Nelson's group at Minnesota Life first caught wind of this concept, "we thought, 'That's very cool, theoretically,' but the immediate business application was not apparent," she says. But when vendors began introducing grid computing products in a business setting, the group began researching whether it had any CPU-intensive applications that would benefit. That's when Minnesota Life's financial management system jumped to the forefront. "It's very calculation-intensive and eats a lot of CPU cycles," Delaney Nelson says.

The company has been running a successful pilot using Microsoft Corp. servers and off-the-shelf software and is planning a production implementation. At first, the application ran on dedicated servers, but it was then expanded to run on partially used servers.

"The grid allows us to use those unused cycles on other servers and not interrupt their primary use," Delaney Nelson says. "They tell the grid when they're available so we don't have to buy more servers, and we're able to process the application much faster."

Minnesota Life probably won't expand on this initial foray into grid computing in the near term. "It was just the right answer for that application," she says. And for many companies, it still poses numerous obstacles, particularly the need to manage multiple environments at once.

With widespread budget crunches, business pressures and a never-ending march of new technology to track, today's IT leaders could easily get overwhelmed. When asked how they keep up, the answer in most cases is by surrounding themselves with trusted people.

"Clearly, the CIO can't know everything, so we have to rely on good people — not only our own staff but vendor partners, the technology community, as well as lessons learned from peers in business and higher education," Notre Dame's Wishon says.

"The key," he adds, "is putting together a team of people who are willing to devote the time, energy, discipline and rigor to maximize our chances of success." **42861**

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"We consciously keep an eye on the horizon and ... the technologies ... in which we want to lead," says Minnesota Life's JEAN DELANEY NELSON.



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- 3-Yr Next Business Day On-Site Service†
- Small Business Pricing

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- Upgradable to 8GB of DDR SDRAM
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- RAID 5 Included
- Active ID Front Bezel for Monitoring System Health
- 3-Yr Next Business Day On-Site Service†
- Small Business Pricing

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- Advanced Network Management and Security Features
- Industry Standard CLI and Easy-to-Use Web Interface
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- **Whom he admires most in IT:** Carly Fiorina, because she demonstrated that bad odds could be overcome with clear focus, vision and tenacity
- **Latest book read:** *Who Moved My Cheese?*, by Spencer Johnson
- **Favorite TV programs:** *Everybody Loves Raymond* and CNN programming
- **Favorite sport:** Soccer. Favorite teams are the U.S. World Cup team, the Jamaican team, the Brazilian team and the Chinese Women's World Cup team
- **His soul food:** Ackee (a vegetable) and codfish, a national food of Jamaica



Dial CIO EVON L. JONES gives his IT staff direct responsibilities to encourage innovation that adds value to the business.

Inspiration

■ EVON L. JONES

The Dial Corp.
Senior vice president and CIO

BY TODD R. WEISS

INSPIRING PEOPLE within an organization to do their best and work hard for the common good is the hallmark of a great leader.

WHAT Makes A LEADER

IT leaders embody a combination of strength and compassion, technical know-how and business savvy. These men and women capture the essence of 10 key leadership characteristics. Here's how they've used those abilities to succeed.

For Evon L. Jones, senior vice president and CIO at The Dial Corp. in Scottsdale, Ariz., engaging workers in his IT department is just part of what makes him tick. "I have a basic philosophy that says you have to gain the [viewpoints] of the people you work with, the people you work for and the people who work for you," he says. "It lets you share their issues and be more successful."

To make his staffers a part of the process of making IT better at the consumer products giant, Jones has given them direct responsibilities to help bring about innovation. "I immerse my team in the business by assigning them partners in the business and functional areas," he says. "My view is, innovations that will add value to the business [are] the only ones worth burning [energy] on."

Last year, Jones and his staff worked to map and rebuild Dial's technical infrastructure in seven months. "The aggressive nature of the project was driven by the need to stabilize Dial's infrastructure and to achieve an average of 99.99% availability to mission-critical systems," Jones says. "The project was a great success."

Being a good leader also means making tough decisions. Over the past few years, the consumer products industry has moved toward joining raw materials exchanges to cut costs and improve efficiencies. But exchanges can cost millions of dollars and aren't always the best answer, Jones says. So to get the benefits of an exchange without the higher costs, Dial created a data synchronization system with its customers and suppliers, he says.

Says co-worker Mike O'Donnell, director of IT architecture and operations: "[Jones] engages and sets the direction at an appropriate level, and he empowers his people to drive success." **42890**

Innovation

DANIEL MORREALE



North Bronx Healthcare Network
CIO

BY EUGENE A. DEMAÎTRE
AS CIO at North Bronx Healthcare Network (NBHN), Daniel Morreale has implemented a voice-recognition system, made a risky network upgrade across a sprawling hospital

campus and saved money, all while improving the relationship between physicians and IT.

The push to electronic health records at NBHN, which is part of New York City Health and Hospitals Corp., has been "ahead of the curve for over 10 years," says Morreale. Protecting patient safety and streamlining treatment through paperless record-keeping "is not an earth-shattering concept," he adds.

However, Morreale ran into trouble when he tried to change the way doctors practice medicine. "Before, IT was viewed as an agent that blocked progress," he recalls.

Morreale "was chartered to 'get doctors happy,'" says Meg Broderick, director of new technology at NBHN. "Change is rocky, but he has maintained high morale, and now clinical people want to work with us, to be involved with IT." Morreale accomplished this change by working closely with users and encouraging his team, Broderick says.

"When Dan came aboard, he rejig-

gled our team structure," she says. "He has recognized talent within the organization and made sure people grow and develop. Nobody wants to leave."

When he joined the computerized physician order-entry project four years ago, Morreale realized that daily progress notes taken during patient exams weren't being captured. "We didn't want to scan sloppy handwriting, and we wanted to enhance documentation for billing of insurance companies, so voice recognition was the solution," he says.

Morreale's team built voice-recognition templates and rolled out training to more than 400 doctors, each of whom received two hours of instruction in using the technology. "I built trust by asking doctors, 'What do you want?' then delivering it," says Morreale, who notes that such trust is unusual at hospitals. "Now, there's a tight, closely knit relationship between IT and the clinical staff," he says.

Even unsuccessful projects can be instructive to

good IT leaders. A Web portal project that was intended to simplify desktops and provide single sign-on access was abandoned after he "underestimated the complexity of the portal," Morreale says. "We learned that we needed to do more homework in the back office."

Still, innovation requires taking risks. "I have open, biweekly meetings and frequently ask, 'What else can we do?'" Morreale says. "The crazier the idea, the more I like it. [I] tend to fund the wacky, out-of-the-box ideas because they foster creative thinking." **C 42759**

Whom he admires most in IT: Louis Hermans, CIO at Solaris Health System, and Joseph Orlando, NBHN's senior VP

Latest book read:
The Teeth of the Tiger, by Tom Clancy

Favorite invention:
Satellite dish

Favorite TV program:
Star Trek: The Next Generation

THIS YEAR'S HONOREES

Pervasive and Wireless Computing, IBM, Armonk, N.Y.

Dan Agronow, 40, vice president of technology, The Weather Channel Interactive Inc., Atlanta

Satish Ajmani, 57, CIO, County of Santa Clara, Calif., San Jose

Jeffery C. Almoncy, 44, vice president, chief technology officer, The Reynolds and Reynolds Co., Dayton, Ohio

Sanjiv Anand, 50, CTO, Hewitt Associates LLC, Lincolnshire, Ill.

Debra Anderson, 44, CIO, Novell Inc., Provo, Utah

Michael J. Ashworth, 39, managing director, CIO, J.P. Morgan Chase Investment Bank, New York

Tracy Austin, 44, CIO, Mandalay Resort Group, Las Vegas

Samuel F. Averitt, 53, vice provost for IT, North Carolina State University, Raleigh

Steve J. Bandrowczak, 43, senior vice president, CIO, DHL International Ltd., Scottsdale, Ariz.

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How They Were Chosen

Each year, *Computerworld* evaluates nominated IT executives in a rigorous survey process. For a detailed look at our methodology, visit our Web site: QuickLink 43549. Special thanks go to our 10 judges, who helped select this year's honorees:



DAMIEN BEAN, vice president of corporate systems, Hilton Hotels Corp. (2003 honoree)



ROBERT GALLETTA, staff director, Federal Reserve Bank of New York (2003 honoree)



CATHY HOTKA, principal, Cathy Hotka & Associates (2000 honoree)



RUSS LAMBERT, chief operating officer, Supra Telecommunications and Information Systems Inc. (2002 honoree)



GEORGE LIN, vice president and CIO, Documentum Inc. (2003 honoree)



ANDRÉ MENDES, chief technology integration officer, Public Broadcasting Service (2001 honoree)



JOHN C. MOON, corporate vice president and CIO, Baxter International Inc. (2003 honoree)



M. LEWIS TEMARES, vice president, CIO and dean of engineering, University of Miami (2002 honoree)



HENRY VOLKMAN, director of IT and CIO, Del Taco Inc. (2003 honoree)



DOUG WATSON, vice president and director of IT, Americas, Bacardi U.S.A. Inc. (2003 honoree)

This year's honorees are presented here in alphabetical order, with information captured at the time they filled out our survey.

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PREMIER
IT LEADERS 2004

Steven J. Adamo, 43, general manager of business systems development, Panasonic USA, Secaucus, N.J.

Austin A. Adams, 60, CIO, Bank One Corp., Chicago

Rodney Adkins, 45, general manager,

LEADER'S ALMANAC

Worst Decisions

Even the best IT leaders have made blunders in their careers — in fact, those lessons often forge stronger leaders. These are some of the decisions that our Premier 100 IT Leaders would take back if they could.

DAN AGRONOW

Vice president of technology,
The Weather Channel Interactive Inc.,
Atlanta

■ In early 2000, when I first joined Weather.com as director of site operations, I had the opportunity to have an external security audit performed. Because of the many other high-priority projects, limited staff and site-instability problems, I decided to cancel the audit. I thought the audit was premature because I already had a bunch of known security issues, and I felt the audit would be more useful later in the year. But about four months later, the Weather.com Web site was down for over seven hours due to a denial-of-service attack. I think and worry about security all the time now. I have a chief of security now, and we do security audits every quarter.

JUDI ZITO

CIO, Miami-Dade County, Miami

■ My mistake was giving in to requests to rewrite a system without insisting that business process be redesigned as a first step. In my experience, there have been times when a customer has asked that a system be rewritten just as the technology becomes obsolete. Nowadays, I make it my business to challenge existing processes and help them find better ways of doing things before the rewrite project begins.

ROBERT W. REEG

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Passion

■ PATRICIA COFFEY



Allstate Insurance Co.
Assistant vice president

BY CAROL SLIWA

MICROSOFT'S .Net development platform was still in beta testing in late 2001 when Patricia Coffey chose it for the front end of a portal site that agents would use to interact with Allstate Insurance Co.'s financial services business.

More established J2EE technologies and IBM's WebSphere application server would be used for integration with the company's mainframe systems. But Coffey, who was responsible for Allstate Financial's technology, decided to take a calculated risk on Web services and the .Net tools.

For starters, she knew that the company's front-end infrastructure was already Microsoft-based. She had also talked with other companies using the beta version of .Net tools. Plus, she figured it was a safe bet that Microsoft would do "whatever it took" to make sure the project succeeded because it "needed a win as bad as we did."

Coffey is passionate about her work, and she was convinced that Allstate's financial services business had reached a "do-or-die" point with its Web site after some false starts.

"We just needed to get something out there, and we needed to get it out there well," she says. "We were late in

the game in financial services in creating a Web site, and we had seen what everybody else had done. I felt that we had a one-time shot to leapfrog."

AccessAllstate.com is now the top life insurance/annuity site for financial professionals, as ranked by Dalbar Inc., a Toronto-based market research firm in the financial services industry.

And Northbrook, Ill.-based Allstate got more than a Web site. Coffey, who is now an assistant vice president, notes that the company now has an integration layer that gives it "all kinds of freedom" to combine systems in the back end. J2EE is the corporate standard for mainframe integration; .Net is for the front end. And components have been extended and reused for other projects, bringing significant savings.

"Pat maintained a can-do, positive attitude throughout the process with her team, with the client population and internally with my leadership team. She was very objective but clearly positive

that 'we'll get it done, we'll get the results,'" says Michael Roche, who became CIO of Allstate Financial after the AccessAllstate.com project began.

In what was perhaps the biggest compliment he has paid to Coffey, Roche asked her to join his team when he was promoted to CIO of Allstate's larger property and casualty business. "I've got her working on some of the most significant efforts we have to raise this company to a higher level. You might say [Coffey] was my one draft pick," he says.

Q 43362

- Latest book read: *Founding Brothers: The Revolutionary Generation*, by Joseph J. Ellis
- Favorite movie: *It's a Wonderful Life*
- Favorite non-work-related Web sites: *Lancome* and *Amazon.com*
- Her soul food: "Is that like comfort food? Ice cream. That's my weakness."

THIS YEAR'S HONOREES

Brad Boston, 48, CIO, senior vice president, Cisco Systems Inc., San Jose

Sara Braziller, 42, independent consultant, St. Paul, Minn.; formerly vice president, CIO, Jenny Craig Inc.

Philip J. Brody, 57, CTO, Clark County School District, Las Vegas

Don Buskard, 47, senior vice president, CTO, AXA Financial Services LLC, New York

Ronald J. Calderone, 52, CIO, Reliant Pharmaceuticals LLC, Liberty Corner, N.J.

Jeffrey Campbell, 47, vice president of technology services, CIO, The Burlington Northern and Santa Fe Railway Co., Fort Worth, Texas

Patrick Clancy, 48, director of IT, The New York Academy of Medicine, New York

Joseph Cleveland, 58, CIO, Lockheed Martin Corp., Orlando

Patricia Coffey, 45, assistant vice president, Allstate Insurance Co., Northbrook, Ill.

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David Bauer, 43, first vice president, chief information security and privacy officer, Merrill Lynch & Co., Jersey City, N.J.

Paul Bergamo, 41, CTO, Liberty Mutual Insurance Co., Portsmouth, N.H.

Creativity

RONALD CALDERONE



**Reliant Pharmaceuticals LLC
CIO**

BY LINDA ROSENCRANCE
WHEN THE SALESPeople at Reliant Pharmaceuticals LLC needed an automated system for reporting call activity, they turned to CIO Ronald Calderone. He didn't let them down.

The Liberty Corner, N.J.-based company was using an obsolete, error-riddled, paper-based system. As a result, it often took eight to 10 weeks for the sales management team to get important information, including the doctors visited, products presented and samples dropped off, from their representatives in the field.

"First, the sales reps would report their call activity on paper forms, and then those forms would be sent to a firm for keypunching, which caused the delay in the information reporting," Calderone says. "That wasn't effective for sales management to direct the efforts of the sales force." He says he knew there had to be a better way.

Faced with the budget constraints of a small start-up, Calderone had to develop a system that was outside the traditional sales force automation or customer relationship management approach taken by larger companies, which could cost upward of \$6 million. "I kept saying there has to be a

better way to electronically capture this information without providing the sales reps with expensive equipment," Calderone says.

So he decided to build an interactive voice-response system that salespeople could access via the telephone. Sales reps now respond to prompts asking for the same information they would include in their paper reports. The system, rolled out in October 2002, also allows the salespeople to edit their responses.

"The system was developed in two months, rolled out in four days, and it only cost a few hundred thousand dollars," he says. "Now, a call activity report can be filed in under three minutes."

Calderone says he takes pride in learning about business problems so he can determine what technology can be applied to address them. It's important, too, to have clear roles and responsibilities for employees so they can help the company achieve its objectives, he says.

"He is so creative and forward-thinking," says Robin McWilliams, manager of telecommunications and help desk support at Reliant. "He takes a customer's needs and comes up with creative solutions. Ron is always thinking out of the box. Sometimes it amazes me how he can take an idea that seems so far out of reach and turn it into reality. He also constantly pushes our staff to learn about new technologies to see where they may fit into our future strategies." **43275**

- **Whom he admires most in IT:** Ray Kurzweil
- **Latest book read:** *River of Ruin*, by Jack DuBrul
- **Favorite TV programs:** *Everybody Loves Raymond* and *Friends*
- **Favorite non-work-related Web sites:** MSN.com and Ask Jeeves
- **Best vacation ever taken:** A relaxing family vacation in Tampa, Fla.
- **His soul food:** Lasagna

THIS YEAR'S HONOREES

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Continued from page 48

Martin Colburn, 43, executive vice president, CTO, NASD Inc., Rockville, Md.

C. Thomas Cook, 64, senior vice president, CIO, Commerce Bancshares Inc., Kansas City, Mo.

Randy Cowen, 52, CIO, Goldman Sachs & Co., New York

Joe Drouin, 35, vice president, CIO, TRW Automotive Inc., Livonia, Mich.

Hossein Eslambolchi, president, AT&T Labs; CTO, CIO, AT&T Corp., Bedminster, N.J.

William M. Farrow III, 48, executive vice president, CIO, Chicago Board of Trade

Dennis Fishback, 50, senior vice president, CIO, Calpine Corp., San Jose

Tom Flanagan, 54, CIO,

MCI, Ashburn, Va.

John M. Gilligan, 52, CIO, U.S. Air Force, Washington

Jason Glazier, 35, senior vice president, chief technology and e-commerce officer, Lincoln Financial Group, Philadelphia

John Golden, 37, executive vice president, CIO, CNA Financial Corp., Chicago

Bruce J. Goodman, senior vice president, chief service and information officer, Humana Inc., Louisville, Ky.

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LEADER'S ALMANAC

Worst Decisions

Continued from page 48

with a reporting language called Mark IV. Their skills with Cobol, however, were weak. As requirements were completed, I questioned whether the functionality of Mark IV could handle the complex reporting and data requirements. But I chose to continue with Mark IV since that's where the expertise of my team lay. In hindsight, I learned that you can't let limitations of your team dictate the technology selected. Conoco had to rewrite the tax reporting system within two years of implementation.

CURT PEDERSON

Vice provost for information services, Oregon State University, Corvallis
One mistake, back when I was CIO at a large Washington state agency, was mandating PCs and eliminating Mac computers. The 80 Mac zealots portrayed me as a dictator who would next require Nehru jackets and Yugo automobiles. In hindsight - if I had listened more - we probably would have discovered how to coexist.

GLEN SALOW

Executive vice president, CIO, American Express Co., New York
About 12 years ago, I was asked to develop a state-of-the-art system to enable bond trading. And I was asked to do it inside a skunk works area within the technology organization - without customer involvement. The idea was to demonstrate how well IT understood the company's business and technology's contribution. The good news is that we developed a really hot prototype, but it needed a lot more engineering to be production-worthy. However, since the customer had no equity in the system, they outright rejected it. The system never really saw the light of day. Lesson learned: Have customer equity from Day 1 or don't move to Day 2.

BERNARD W. SHUNFENTHAL
Executive vice president, director of enterprise technology development, KeyCorp, Cleveland

Coding in Java in 1998. I should have

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WHEN THE SALESPeople at Reliant Pharmaceuticals LLC needed an automated system for reporting call activity, they turned to CIO Ronald Calderone. He didn't let them down.

The Liberty Corner, N.J.-based company was using an obsolete, error-riddled, paper-based system. As a result, it often took eight to 10 weeks for the sales management team to get important information, including the doctors visited, products presented and samples dropped off, from their representatives in the field.

"First, the sales reps would report their call activity on paper forms, and then those forms would be sent to a firm for keypunching, which caused the delay in the information reporting," Calderone says. "That wasn't effective for sales management to direct the efforts of the sales force." He says he knew there had to be a better way.

Faced with the budget constraints of a small start-up, Calderone had to develop a system that was outside the traditional sales force automation or customer relationship management approach taken by larger companies, which could cost upward of \$6 million. "I kept saying there has to be a

better way to electronically capture this information without providing the sales reps with expensive equipment," Calderone says.

So he decided to build an interactive voice-response system that salespeople could access via the telephone. Sales reps now respond to prompts asking for the same information they would include in their paper reports. The system, rolled out in October 2002, also allows the salespeople to edit their responses.

"The system was developed in two months, rolled out in four days, and it only cost a few hundred thousand dollars," he says. "Now, a call activity report can be filed in under three minutes."

Calderone says he takes pride in learning about business problems so he can determine what technology can be applied to address them. It's important, too, to have clear roles and responsibilities

for employees so they can help the company achieve its objectives, he says.

"He is so creative and forward-thinking," says Robin McWilliams, manager of telecommunications and help desk support at Reliant. "He takes a customer's needs and comes up with creative solutions. Ron is always thinking out of the box. Sometimes it amazes me how he can take an idea that seems so far out of reach and turn it into reality. He also constantly pushes our staff to learn about new technologies to see where they may fit into our future strategies." ☎ 43275

- **Whom he admires most in IT:** Ray Kurzweil
- **Latest book read:** *River of Ruin*, by Jack DuBrul
- **Favorite TV programs:** *Everybody Loves Raymond* and *Friends*
- **Favorite non-work-related Web sites:** MSN.com and Ask Jeeves
- **Best vacation ever taken:** A relaxing family vacation in Tampa, Fla.
- **His soul food:** Lasagna

THIS YEAR'S HONOREES

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Martin Colburn, 43, executive vice president, CTO, NASD Inc., Rockville, Md.

C. Thomas Cook, 64, senior vice president, CIO, Commerce Bancshares Inc., Kansas City, Mo.

Randy Cowen, 52, CIO, Goldman Sachs & Co., New York

Joe Drouin, 35, vice president, CIO, TRW Automotive Inc., Livonia, Mich.

Hossein Eslambolchi, president, AT&T Labs: CTO, CIO, AT&T Corp., Bedminster, N.J.

William M. Farrow III, 48, executive vice president, CIO, Chicago Board of Trade

Dennis Fishback, 50, senior vice president, CIO, Calpine Corp., San Jose

Tom Flanagan, 54, CIO,

MCI, Ashburn, Va.

John M. Gilligan, 52, CIO, U.S. Air Force, Washington

Jason Glazier, 35, senior vice president, chief technology and e-commerce officer, Lincoln Financial Group, Philadelphia

John Golden, 37, executive vice president, CIO, CNA Financial Corp., Chicago

Bruce J. Goodman, senior vice president, chief service and information officer, Humana Inc., Louisville, Ky.

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LEADER'S ALMANAC

Worst Decisions

Continued from page 48

with a reporting language called Mark IV. Their skills with Cobol, however, were weak. As requirements were completed, I questioned whether the functionality of Mark IV could handle the complex reporting and data requirements. But I chose to continue with Mark IV since that's where the expertise of my team lay. In hindsight, I learned that you can't let limitations of your team dictate the technology selected. Conoco had to rewrite the tax reporting system within two years of implementation.

CURT PEDERSON

Vice provost for information services, Oregon State University, Corvallis
One mistake, back when I was CIO at a large Washington state agency, was mandating PCs and eliminating Mac computers. The 80 Mac zealots portrayed me as a dictator who would next require Nehru jackets and Yugo automobiles. In hindsight - if I had listened more - we probably would have discovered how to coexist.

GLEN SALOW

Executive vice president, CIO, American Express Co., New York
About 12 years ago, I was asked to develop a state-of-the-art system to enable bond trading. And I was asked to do it inside a skunk works area within the technology organization - without customer involvement. The idea was to demonstrate how well IT understood the company's business and technology's contribution. The good news is that we developed a really hot prototype, but it needed a lot more engineering to be production-worthy. However, since the customer had no equity in the system, they outright rejected it. The system never really saw the light of day. Lesson learned: Have customer equity from Day 1 or don't move to Day 2.

BERNARD W. SHUNFENTHAL
Executive vice president, director of enterprise technology development, KeyCorp, Cleveland

Coding in Java in 1998. I should have

Continued on page 50

LEADER'S ALMANAC

Worst Decisions

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chosen a more mature technology and not have been on the bleeding edge.

BILL VASS

Vice president of Sun IT, Sun Microsystems Inc., Santa Clara, Calif.
One mistake was deployment of Microsoft Exchange when I was a senior executive in the CIO's office at the Pentagon. The Exchange mail system required way too many servers, was too hard to manage and was very expensive. Now I see that one or two clustered servers, with an open systems-based mail product, could have done the job for much less money and with much less downtime.

PAUL BERGAMO

Chief technology officer, Liberty Mutual Insurance Co., Portsmouth, N.H.

At a previous employer, I allowed the business to select two different vendors for financial ERP and human resources ERP systems. Since these applications were to go into production at the same time, leveraging similar resources and services, I should have built a better business case for using consistent technology to reduce the difficulty of implementation and reduce the long-term support costs and complexity.

JOHN GOLDEN

Executive vice president, CIO, CNA Financial Corp., Chicago

I regret the decision in my former job to build a business rules engine. At the time (1998), this type of technology was new in the marketplace, and therefore we felt we could build one better. We built a good one, but it took a significant amount of energy to build and, more importantly, to maintain. If we had waited 18 months longer, there were great solutions in the marketplace. The real kicker here was that we failed to see that the business wasn't experienced enough to effectively use a rules engine. So waiting the extra 18 months would have had little to no impact on the business. **43099**

Compiled and edited by Mitch Betts, Features editor.

Determination

KEITH MORROW



7-Eleven Inc.
CIO and vice president of IS

BY TODD R. WEISS

WHEN HE INITIATED a project to bring a corporate portal to Dallas-based convenience store chain 7-Eleven Inc. in 2002, Keith Morrow, CIO and vice president of information systems, took one of the biggest IT risks of his career.

From the start, he says, "there were no clear business sponsors for the project at all" from within the company.

But today, despite the lack of executive endorsements, a learning curve for the new technology and some early cultural resistance from users, the portal is a huge success across the company's 5,300 U.S. store locations, Morrow says. And a long list of employees are eagerly awaiting access to it.

Morrow says the portal, which is used for training and communications, is one leadership challenge he's particularly proud of, in large part because he was able to visualize the eventual benefit for the company and its 70,000 workers early on. But the project has also offered some lessons, he says.

"The route I chose was to go it alone" in bringing in the new tech-

nology, "without significant executive support along the way," he says.

"I will never do it that way again and [will] always insist upon intimate involvement, participation and ownership by our executive team," Morrow says. "Culturally, it is too difficult and slow to reap the full benefit of the investment without this level of buy-in and sponsorship."

That ability to adjust and learn from his experiences helps make Morrow a leader at 7-Eleven. Another factor is what he describes as an "even-keel" approach to handling people and adverse situations. Morrow

says his basic strategy is to "get the big picture [and] not get alarmed if something needs to [change] to make a project succeed."

That calmness, he says, he learned from his grandfather, an entrepreneur who ran many businesses and made meaningful contributions to his community. "He gave me the view that people make business work," Morrow says.

Kathy Walsh, 7-Eleven's director of emerging technologies, says one of Morrow's greatest achievements has been to help get the business and its IT systems and workers aligned.

Morrow has found technologies used in other industries and creatively adapted them to the needs of 7-Eleven, she says. "Keith has high expectations for us," Walsh adds. "But they're no more than what he has for himself." **42891**

■ **Whom he admires most in IT:** "Michael Dell, because he's a Texan and because of his mastery of customers, manufacturing efficiency, competition, retail online sales and innovation."

■ **Latest book read:** *The Goal: A Process of Ongoing Improvement*, by Eliyahu M. Goldratt and Jeff Cox

■ **Favorite TV program:** *Monster Garage*

■ **Dream job:** Yacht captain for a well-known multi-billionaire, who most of the time would let Morrow use the ship on his own

THIS YEAR'S HONOREES



Continued from page 49

Maureen P. Govern, 48, CTO, Convergys Corp., Cincinnati

Robert Grawien, 45, vice president of application development, Schneider National Inc., Green Bay, Wis.

Rick Hamilton, 33, CIO, DFS Group Ltd., San Francisco

Ben Harris, 28, deputy secretary of operations and technology, Florida Department of Children & Families, Tallahassee

Ken Harris, 54, senior vice president, CIO, Gap Inc., San Francisco

Kenneth M. Harvey, 42, group executive, CIO, Household International Inc., Prospect Heights, Ill.

William G. Head, 54, CTO, director of technology, Defense Finance and Accounting Service, Kansas City, Mo.

Mark F. Hedley, 39, senior vice president, CTO, Wyndham International Inc., Dallas

Albert Hitchcock, 38, CIO, Nortel Networks Ltd., Research Triangle Park, N.C.

Murray Horwitz, 45, CIO, Uline Shipping Supplies, Waukegan, Ill.

Gregory S. Jackson, 41, CIO, State of Ohio, Columbus

Randall James, 45, senior vice president, CIO, Americo Life Inc., Kansas City, Mo.

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Drive

■ MADGE M. MEYER



State Street Corp.
Executive vice president of technology infrastructure services
BY LINDA ROSENCRANCE
EVEN BEFORE Madge M. Meyer was hired as senior vice president of technology infrastructure services at State Street Corp. in 2001, she knew that if

she got the job, her top priority would be to save money by running IT more efficiently.

"The message was clear... so I focused on cost savings and cost avoidance," she says. "Not just for one year, but also for the future. We had to do more — better, faster and cheaper."

Meyer, who was promoted in December to executive vice president, says her most successful and critical IT initiative is State Street's 2003 Infrastructure Efficiency Program, which goes far beyond technology implementation. "We have placed an equal focus on improving asset utilization, streamlining processes, renegotiating vendor contracts and eliminating redundancy and complexity through consolidation," says Meyer.

The program consists of smaller projects, each focused on an infrastructure service, including storage management, server consolidation, network management, asset management and global help desk support.

Now in its second phase, the project has cut \$40 million from State Street's

annual IT budget and is expected to save millions more. "Instead of structuring by platforms, I restructured by functions," she says. "We reorganized the organization so we can scale much better, respond much faster and give people more chances to learn a lot more about different platforms, and we streamlined the processes so they're not so labor-intensive."

Meyer says automation is one of the major initiatives of her organization. For example, help desk support personnel can now fix problems remotely. "We give them the remote tools they need so they can view my system from the help desk location, take over my system and fix the problem instead of sending someone to my desktop," she says.

Meyer says her group tries to understand where the business is going so IT can respond more effectively. "We were able to reduce costs to each business area by better negotiation of all the contracts, so we only buy what we need and we only pay when we use it," she says. "We've changed a lot of our practices so we get the most out of the dollars that we spend on IT."

She says a good leader focuses on business, technology and people. "As a leader, you have to know where the organization is going and then set a very, very clear direction for everyone to follow," she says.

- **Whom she admires most in IT:** Thomas Watson Jr.
- **Latest book read:** *Six Degrees: The Science of a Connected Age*, by Duncan J. Watts
- **Favorite TV program:** *The West Wing*
- **Best vacation ever taken:** China, the land of her birth

Says Meyer's boss, State Street CIO Joseph Antonellis, "She understands our business, and she supports our current business growth. Over the past 18 months, she has saved us a considerable amount through consolidation of hardware and storage and best practices." **42964**

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Evon L. Jones, 38, senior vice president, CIO, The Dial Corp., Scottsdale, Ariz.

David Jordan, 54, chief information security officer, Arlington County Government, Arlington, Va.

Scot Michael Klimke, 46, vice president of IT, CIO, Network Appliance Inc., Sunnyvale, Calif.

Christopher Kowalsky, 54, senior vice president, CIO, Education Management Corp., Pittsburgh

Chris Laping, 31, vice president, CIO, GMAC Commercial Holding Capital Markets Corp., Denver

Richard LeFave, 52, CIO, senior vice president, Nextel Communications Inc., Hemdon, Va.

Brian Leinbach, 43, senior vice presi-

dent of operations, Delta Technology Inc., Atlanta

Robert Leo Jr., 35, director of data management and administration, Landstar System Inc., Jacksonville, Fla.

Marina Levinson, 44, vice president, CIO, Palm Inc., Milpitas, Calif.

Roy E. Lowrance, 52, CTO, Capital One Financial Corp., McLean, Va.

Michael McClaskey, 40, CIO, Perot Systems Corp., Plano, Texas

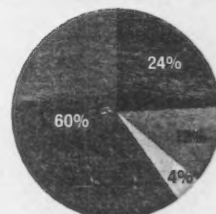
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LEADER'S
ALMANAC

Who They Are

Premier 100: This year's class

87	are men
13	are women
46	is their average age



How they communicate the role and abilities of IT to other business units:

- By seeking out opportunities to create synergies between IT and other business units **60%**
- By being active on the executive board **24%**
- By keeping other business units up to speed with memos and meetings about IT goals and projects **12%**
- By working on specific projects for other business units **4%**

Their organizations'
IT staffing

2,670	is the average P100 IT staff size
1,717	is average size of IT staff for which each is responsible
34%	reduced their staff size in the past year (on average, by 10%)
31%	increased their staff size in the past year (on average, by 11%)
35%	saw no change

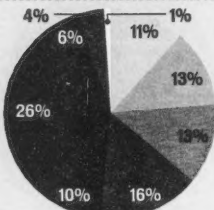
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SOURCE: SURVEY RESPONSES FROM THE 2004 PREMIER 100 IT LEADERS

LEADER'S ALMANAC

Overall, their IT budgets will hold steady over the next 12 months.

0.08%	is the average change
32%	increased their IT budgets (on average, by 12%)
32%	decreased their IT budgets (on average, by 12%)
36%	saw no change



Their organizations' total IT budget for the next 12 months:

\$1 billion or more	11%
\$500 million to \$999.9 million	13%
\$250 million to \$499.9 million	13%
\$100 million to \$249.9 million	16%
\$50 million to \$99.9 million	10%
\$10 million to \$49.9 million	26%
\$1 million to \$9.9 million	6%
\$500,000 to \$999,999	4%
\$100,000 to \$499,999	1%

Contract labor will take a larger share of their combined IT budgets over the next 12 months.

17%	is the average percentage devoted to contract labor
31%	reported an increase in budget allocated for outsourcing or contract labor (on average, by 19%)
16%	reported a decrease in budget allocated for contract labor (on average, by 14%)
46%	saw no change

SOURCE: SURVEY RESPONSES FROM THE 2004 PREMIER 100 IT LEADERS

Candor

■ RANDY COWEN



Goldman Sachs & Co.
CIO

BY LUCAS MEARIAN

THE SINGLE biggest challenge Randy Cowen has faced over the past few years is learning to do more with less. But it's an art form the CIO of New York-based Goldman Sachs & Co. has mastered quickly.

"You have fewer people to do it, and need to spend less," says Cowen, referring to a directive from Goldman Sachs' management team.

To cut costs while preserving his core IT team, Cowen says he focused on moving from Sun Microsystems servers to Linux- and Intel-based servers, getting away from large, monolithic storage arrays and replacing them with modular midtier storage platforms. That alone drove disk utilization rates from 30% to 60%, Cowen says.

"We were able to dramatically hold down our server spending for about a year and a half," he says. At the same time, Cowen renegotiated maintenance and service contracts with telecommunications providers and other vendors.

After the recession, "it's a different world out there" when it comes to

driving a good bargain, he says.

Cowen also axed consulting and outsourcing costs, something that Goldman Sachs spent lavishly on during the boom years of the late 1990s.

The last place Cowen looked for savings was in head count, he says. "We cut back much more dramatically on the consultant side and protected employees as much as possible," he says.

Cowen credits his years as an applications programmer for his intimate knowledge of systems, which has helped him to understand and communicate the facts of a project. "Let's have an

honest discussion about choices," says Cowen of his approach. "Political behavior has to be checked at the door."

He says he's just as honest about financial outlooks and layoffs. By being open, employees are given the facts rather than being subjected to speculation and rumors.

"I have spent a lot of time in small meetings with 10 to 12 people," he says. "I think I got a lot of mileage from those meetings, as well as from continuing to fund training, even during the downturn in the business."

Cowen counsels others to learn as much as they can about their jobs and their businesses to understand how they interrelate. "That will pay such huge dividends because you never know what you will be working on in the future," he says. **■ 43274**

- **Whom he admires most in IT:** Bill Joy, co-founder and former chief scientist of Sun Microsystems Inc.
- **Latest book read:** *Nothing Like It in the World: The Men Who Built the Transcontinental Railroad, 1865-1869*, by Stephen E. Ambrose
- **Favorite invention:** The MP3 player
- **Favorite non-work-related Web site:** "The one I most enjoy, and my son enjoys, is the NASA space Web site."
- **His soul food:** French fries

THIS YEAR'S HONOREES

Company of America, New York

Michael McRobbie, 52, vice president for IT, CIO, Indiana University, Bloomington

Madge M. Meyer, executive vice president of technology infrastructure services, State Street Corp., North Quincy, Mass.

Michael Moon Sr., 53, CIO, global vice president of information services, Haworth Inc., Holland, Mich.

Daniel Morreale, 49, CIO, North Bronx Healthcare Network, New York

Keith Morrow, 44, CIO, vice president of information systems, 7-Eleven Inc., Dallas

Kamal Narang, 33, chief technical officer, Capital Technology Information Services Inc., Rockville, Md.

Jean Delaney Nelson, 45, vice president, CIO, Minnesota Life Insurance Co., St. Paul, Minn.

Timothy C. O'Rourke, 51, vice president for computer and information services, Temple University, Philadelphia

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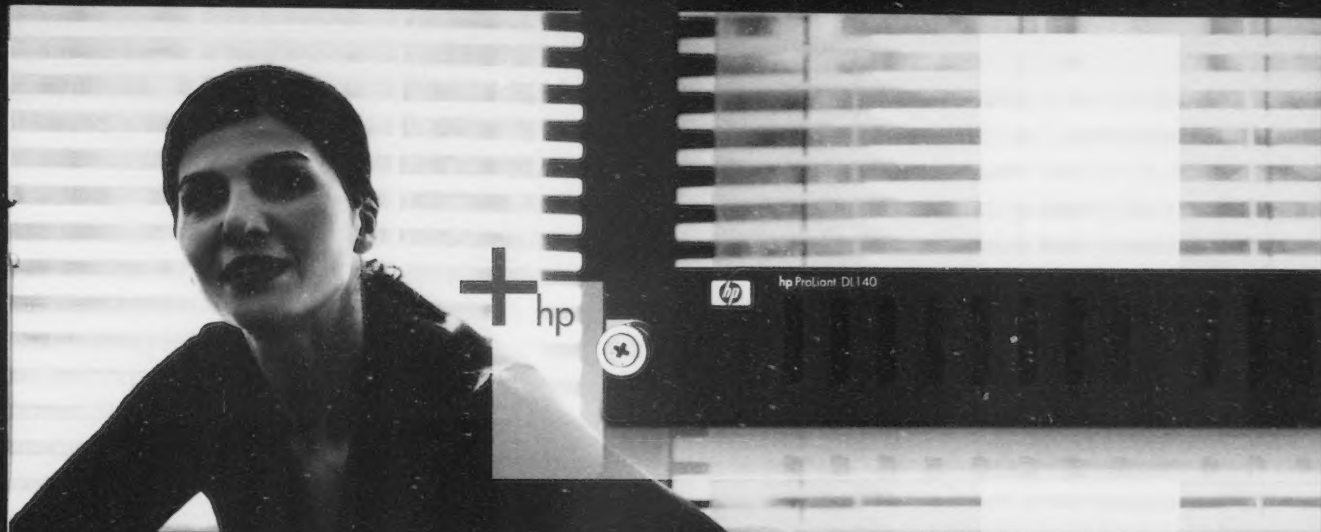
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Lyn McDermid, 54, senior vice president, CIO, Dominion Resources Inc., Richmond, Va.

Shelley McIntyre, 52, second vice president of business technology services, The Guardian Life Insurance

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LEADER'S
ALMANACTOP 20: Their most
critical technologies

- 1 Security
- 2 Web services
- 3 Networking
- 4 Wireless/mobile
- 5 Voice technologies
- 6 Business analytics
- 7 Enterprise integration
- 8 Vertical-industry-specific applications
- 9 Collaboration technologies
- 10 Internet/Web technologies
- 11 Mainframe/legacy systems
- 12 Data management
- 13 Application development
- 14 Storage
- 15 ERP software
- 16 Servers
- 17 E-commerce
- 18 Operating systems
- 19 CRM software
- 20 Linux/open-source

TOP 10: Their top strategic
vendor partners or suppliers

- 1 IBM
- 2 Microsoft Corp.
- 3 Oracle Corp.
- 4 Cisco Systems Inc.
- 5 Hewlett-Packard Co.
- 6 Sun Microsystems Inc.
- 7 AT&T Corp.
- 8 Dell Inc.
- 9 PeopleSoft Inc.
- 10 EMC Corp.

BASED ON SURVEY RESPONSES FROM
THE 2004 PREMIER 100 IT LEADERS

Understanding

JEFFERY C. ALMONEY



The Reynolds and Reynolds Co.
Vice president and CTO

BY MARC L. SONGINI

IN SHAPING almost any IT project, the input of the people involved and the validity of the processes must always take priority over the technology itself, says Jeffery C. Almoney,

vice president and chief technology officer at The Reynolds and Reynolds Co.

Almoney knows what he's talking about. He's in the midst of a massive project to get the automotive systems and services provider's global end users Internet-enabled. The effort requires the rollout of

a Web services-based ERP software infrastructure based on a highly customized set of applications from Microsoft Corp. subsidiary Navision. For the past six months or so, Almoney has been in charge of the phased ERP installation, which will enable customers to gradually upgrade from the company's two other existing home-grown legacy systems.

"It's our intended strategy to own the best processes to support automotive retailers and deliver [the processes] to the customers with the best technology," explains Almoney. The implementation includes the documentation and training required for Reynold's 20,000 customers to

use the systems successfully.

The first milestone in the project was the creation of a "living document," completed at the end of last September, that acts as the road map for the installation. Almoney says he believes that "technologies are almost secondary" in importance to the teams involved, which in this case include people from the business side who are taking a leadership role in the project.

To facilitate the effort, Almoney says he works behind the scenes to create "successful scenarios," in addition to working closely with Microsoft and IBM, which are strategic partners on the project.

"Under Jeff's leadership, we've put together a technology framework for the next 10 years," says Bryon Propst, director of strategy in the office of the chief technology officer at Dayton, Ohio-based

Reynolds. Almoney's background in research gives him the ability to apply technology to business problems in a practical way instead of "just working in a vacuum," he says.

Unlike other "propeller head" technologists, Almoney is able to communicate the value of IT investments to the business people, says Propst.

"When he's done talking to the business person, they walk away thinking the [IT] idea was theirs," he says. Almoney also treats Microsoft and IBM as partners, says Propst, and not just as suppliers, so they perform as if "they had a vested interest in the success of the project and its payoff." **43138**

- **Whom he admires most in IT:** IBM's Irving Wladawsky-Berger
- **Latest book read:** *Cryptonomicon: A Novel*, by Neal Stephenson
- **Favorite invention:** Personal video recorder
- **Favorite TV program:** *Stargate SG-1*
- **Favorite non-work-related Web site:** eBay
- **Best vacation ever taken:** Touring Switzerland

THIS YEAR'S HONOREES

Ameet Patel, 37, managing executive, LabMorgan, a unit of J.P. Morgan Chase & Co., New York

Curt Pederson, 57, vice provost for information services, Oregon State University, Corvallis

Brad W. Peiffer, 44, group director of global database management, IMS Health Inc., Plymouth Meeting, Pa.

Kim Perdikou, 46, CIO, Juniper Networks Inc., Sunnyvale, Calif.

Carlos M. Recalde, 48, executive director of technology, Americas region,

KPMG LLP, Montvale, N.J.

Robert W. Reeg, 47, senior vice president of systems development, MasterCard International Inc., O'Fallon, Mo.

Linda L.E. Reino, 41, CIO, Universal Health Services Inc., King of Prussia, Pa.

Rob Rennie, 49, vice president of technology, CIO, Florida Community College, Jacksonville

Harry E. Roberts, 44, senior vice president, CIO, Boscov's Department Stores LLC, Reading, Pa.

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John C. Parker, 44, senior vice president, CIO, A.G. Edwards & Sons Inc., St. Louis

Douglas T. Parrish, 49, senior vice president, CTO, The Walt Disney Co. Internet Group, Burbank, Calif.

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Advocacy

■ SANJIV ANAND



Hewitt Associates LLC
CTO

BY LUCAS MEARIAN

SANJIV ANAND doesn't believe in controlling every aspect of an IT project. Instead, the chief technology officer at Hewitt Associates LLC relies on his ability to delegate authority after articulating business goals and a vision to his staff.

Those skills have been put to the test in recent years by the economic slowdown and a string of company acquisitions.

To keep up with the changing business environment, Anand requires his team of 1,800 technologists to maintain close ties with their business counterparts and stay current with what the infrastructure can and can't support in terms of business services. By requiring his staff to understand the business's objectives, "whenever we put together a plan, there's a sense of reality," says Anand. In his 23 years at Lincolnshire, Ill.-based Hewitt, Anand has moved from the business side to the technology side more than once.

Over the past year, Anand's team developed and delivered a human resources portal called HR Workways, for delivering benefits administration, payroll and workforce management services to clients. The project presented unique systems challenges,

involving a high degree of integration across portal technologies, business intelligence applications, ERP transactions and content management systems.

Maureen Kincaid, global practice leader for Hewitt's health management business, has worked with Anand for the past 20 years. She says his effectiveness as a leader is largely because of his understanding of how each of Hewitt's lines of business work.

"His understanding of my line of business, coupled with his technical savvy, has been instrumental to many of the products we've rolled out over the past 20 years," Kincaid says.

Over the past year, Anand has been dealing with what many IT managers face in an increasingly consolidated marketplace: the acquisition and integration of IT services from another company. Hewitt acquired Chicago-based Cyborg Systems Inc., a human resources payroll vendor. The challenge was to integrate Cyborg's software into Hewitt's product development and systems integration shops, "while preserving what's good and augmenting it with our expertise," he says.

Anand says the project was less a technical test and more an organizational challenge of merging the Hewitt and Cyborg development teams. "One advantage we've had at Hewitt is... we've not had to reduce technology spending when it comes to product innovation. When we acquired Cyborg, we were able to simply add people to the Cyborg product development team," he says.

☎ 43584

■ Latest book read:

Execution: The Discipline of Getting Things Done, by Larry Bossidy

■ Favorite TV program:

The Practice

■ Favorite non-work-related Web site:

Yahoo. "A really good place to go to get access to information."

■ Best vacation ever taken:

"My more recent trips to Europe: Paris or London."

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Tony Romero, 58, senior vice president, CIO, Mitsubishi Motors North America Inc., Cypress, Calif.

Richard K. Ronan, 44, senior vice president of global investment management technology, Alliance Capital

Management LP, New York

Dave Ruby, 54, senior vice president of information resources shared services, Marriott International Inc., Washington

Glen Salow, 47, executive vice president, CIO, American Express Co., New York

Thomas Sanzone, 42, CIO, Citigroup Inc., New York

Steven Sheinheit, 55, senior vice president, CTO, MetLife Inc., New York

Thomas W. Shelman, 45, vice president, CIO, Northrop Grumman Corp., Dallas

Bernard W. Shunfenthal, 53, executive vice president, director of enterprise technology development, KeyCorp, Cleveland

Marc S. Sokol, CISM, chief security officer, The Guardian Life Insurance Company of America, New York

Robert E. Taylor, 57, CIO, director of IT, Fulton County Government, Atlanta

Solomon Tessema, 51, director of enterprise architecture and telecommunication services, Southern California Edison Co., Rosemead, Calif.

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LEADER'S ALMANAC

First Jobs

These IT executives weren't born into their leadership roles. Many of this year's Premier 100 IT Leaders started at the bottom and climbed their way up.

DAVID JORDAN

Chief information security officer, Arlington County Government, Arlington, Va.

Back in the '80s, I was a senior test and system integration engineer in the Satellite Business Systems labs in McLean, Va. SBS was formed by Comsat, IBM and Aetna Life & Casualty to use satellites to broadcast broadband data. SBSI was the first commercial satellite to be launched from the space shuttle.

GORDON D. WISHON

CIO, associate vice president, associate provost for IT, University of Notre Dame, Notre Dame, Ind.

After a couple of years in the cockpit of an F-111 fighter during the late 1970s, I spent several years as a consultant to the command staff on issues related to fighter aircraft technology. During this time, I worked on the design and development of the next generation of aircraft and missile systems.

MARINA LEVINSON

Vice president, CIO, Palm Inc., Milpitas, Calif.

I started my career in IT after emigrating from Russia in 1980. My first job was with TRW in San Jose and focused on selecting and implementing a relational database for analytical applications.

CARLOS M. RECALDE

Executive director of technology, Americas region, KPMG LLP, Montvale, N.J.

I started in IT as the director of information services at a New York women's fashion house in the late 1970s. I talked my way into a new position by claiming that I could cut in half the expenses in the shipping department, which comprised 54 people

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LEADER'S
ALMANAC

First Jobs

Continued from page 55

who hand-wrote picking slips and typed invoices. We bought a rudimentary system that had been written by a noncompetitive garment company in California that allowed us to decrease head count to 12 people within nine months. But the real benefit came from getting goods out the door faster.

GREGORY S. JACKSON
CIO, State of Ohio,
Columbus

My first IT job, in 1985, was to build a LAN at my U.S.-based company's new Mexican plant. The LAN would run the inventory control and customs management systems, which needed to tie into the company's U.S. IT systems. I was challenged with provisioning a T1 line from Telefonos de México and coordinating with AT&T. With little industry guidance, no internal experts to lean on and a second language to contend with, I had a blast. The outcome was a success.

MARK F. HEDLEY
Senior vice president, CTO,
Wyndham International Inc., Dallas

I began my career as a systems analyst at the Sheraton Grande Hotel in Los Angeles. A fine introduction to my chosen field—not only did I touch all the hotel's systems, but I quickly became very familiar with all facets of hotel operations and the vital role technology plays in supporting the business. The Sheraton Grande plucked my enthusiasm for hospitality technology.

DEBRA ANDERSON

CIO, Novell Inc., Provo, Utah
My first IT job was at Eastman Kodak in Rochester, N.Y., as a beginning programmer in the photochemicals division. I was one of only three IT support people, and we worked in the plant along with our business customers. We handled everything from their financial system to inventory management to chemical procurement systems.

☎ 43640

Compiled and edited by Jean Consilvio, assistant Management editor.

Influence

■ DENNIS FISHBACK



Calpine Corp.
Senior vice president and CIO
BY MARC L. SONGINI

IT WAS A PRETTY BIG task for Dennis Fishback. Not only was he the first CIO at energy producer Calpine Corp., but it was his task to consolidate IT operations and make them more efficient so his organization could support long-term business goals.

To give an idea of the complexity involved, in 2001, when Fishback joined the San Jose-based company, there were six major, ongoing IT initiatives that had been piloted the year before to support core business processes. The result was project sprawl, with small

application support groups evolving that relied on consultants and contractors. For its part, the IT department's main goal was to maintain the infrastructure used throughout the company and the backbone ERP systems.

Fishback's job was to make the IT plan align with Calpine's corporate one and save money, in keeping with the company's cost-control goals. To that end, he launched an IT assessment and road-map project to sketch out what the organization should look like, identifying its relative weaknesses and strengths. As a result of the assessment, the staff decided that there were some 12 areas of IT responsibility that

covered basic business support and e-business.

Ultimately, Fishback concluded that the company needed a centralized IT organization that would eliminate redundant support units assigned to specific tasks. In turn, there would be fewer vendors, less duplicate spending and greater economies of scale. He also wanted to raise the perception of the value of IT among the business side of the company, in addition to crafting a scalable and flexible organization that could adapt as Calpine needed it to.

The next step was selling this plan to executives, and he recruited a team of experts in the company to help him. "Dennis is knowledgeable about Calpine's business and was able to communicate to other Calpine executives where IT needed to be and how he was going to take us there," says Vice President of IS Loreen Tabbut. "Dennis places a great deal of trust in his team, which always encourages them to go above and beyond."

The team decided on a goal of cutting costs and ensuring that IT projects delivered double their investment. Fishback says that since 2001, the company has achieved a return on investment of \$284 million and cut \$7.3 million in costs.

"A major challenge was creating executive and business-area buy-in to consolidate spending," says Fishback. "Identifying the hidden IT costs and centralizing them was a different way of doing business for Calpine but was necessary to optimize performance and maximize cost savings." ☎ 43355

- **Latest book read:**
Fire Ice, by Clive Cussler
- **Favorite TV program:**
CSI
- **Dream job:** High school or college band director
- **Favorite invention:**
The personal computer
- **Best vacation ever taken:** Christmas at home with his family
- **Favorite non-work-related Web site:** Yahoo
- **His soul food:** Fried okra

THIS YEAR'S HONOREES

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PREMIER
IT LEADERS 2004

Continued from page 55

David Thompson, 37, senior vice president, CIO, PeopleSoft Inc., Pleasanton, Calif.

Scott Thompson, 45, CIO, Visa U.S.A. Inc., San Francisco

Greg Tranter, 46, vice president, CIO,

Allmerica Financial Corp., Worcester, Mass.

Bill Vass, 43, vice president of Sun IT, Sun Microsystems Inc., Santa Clara, Calif.

Martin Wegenstein, 53, vice president, CIO, Autodesk Inc., San Rafael, Calif.

Robert Wischnowsky, 46, CTO, managing director of global technology systems, FleetBoston Financial Corp., Providence, R.I.

Gordon D. Wishon, 50, CIO, associate vice president, associate provost for IT, University of Notre Dame, Notre Dame, Ind.

Paul J. Zazzera, 48, senior vice president, CIO, Time Warner Inc., New York

Judi Zito, 42, CIO, Miami-Dade County, Miami

James Zoccoli, 46, CIO, LifeCare Management Services LLC, Plano, Texas

NOMINATE AN IT LEADER

Do you know someone who has shown leadership through technology? It's not too soon to submit nominations for next year's Premier 100 IT Leaders program:

QuickLink #3930
www.computerworld.com

Programmer/Analysts/Software Engineers sought by s/ware co. for NYC. Must have Bach in Comp Sci/Engg or reltd field & 1-3 yrs exp. Resume to: Quantum Technologies, Inc., 59 John St, NY, NY 10038.

Fluent Inc. has an opening in its Evanston, IL office for a Meshing Software Developer. Must have a M.S. degree in Eng., Comp. Sc., Math. or a related field & 2 yrs. of exp. applying & developing unstructured Hexahedral volume & Quadrilateral surface meshing techniques for CFD packages, as well as exp. w/ C++ programming on Unix or Windows NT platforms. Send resume to Ref. MRR, Donna J. Brazas, HR Manager, 10 Cavendish Court, Centerra Resource Park, Lebanon, NH 03766. Equal Opportunity Employer.

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Project Manager - Plan, direct and coordinate activities of comp. professionals in SAP environ. (HR, FI, CO, SD, MM, etc.). Implement, maintain & support projects; 4 yrs exp. and M.S. in Comp Sci, Engg or related. Exp. ref. req'd. Send res: Anid Infosoft, 2204 Haley St, Oxford, MS 38655.

Programmer Analysts/Systems Analysts for s/ware co for Chicago, IL location. Must have Bach degree in Comp Sci/Comp Eng or reltd field & 1-3 yrs exp. Send resume to: Optimal Solutions Inc, 3 Richmond Drive, Skillman, NJ 08558.

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McData Corporation seeks applicants for the position of Sr. Software Test Engineer in Santa Clara, CA to design, build and implement SAN's, SAN management software and Fibre Channel technologies using SANavigator and EFCM in an MPIO/SMP/FCP/FCIP protocol environment. Requirements for the position include a bachelor's degree in engineering or computer science, 2 yrs exp as a software test engineer and working knowledge of Fibre Channel SAN architecture, SAN Management applications such as SANavigator and EFCM, MPIO/SMP/FCP protocols, SNIA standards, Fibre Channel Analyzer like Finisar and EMC/NMS applications. Respond by resume to Pete Whittle, McData Corporation, 380 Interlock, Crescent, Broomfield, CO 80021.

Stanford Technology Partners Inc. is an Information Technology consulting company with its clients across the USA. We seek an UNIX, Solaris System Administrator. Duties include systems administration for global e-business retail exchange, scalability analysis and capacity planning, expertise on sun clustering with a strong focus on design and architecture, assist with transition to colocation environments, establish and maintain close working relationships with application teams and users in the design, development, tuning, and problem resolution of systems, communicate effectively in meetings and discussions, maintain software license inventory and Perform emergency problem resolution. If interested, please send resume to: Stanford Technology Partners, Inc. 289 Boston Timpule Suite #6 Shrewsbury, MA 01545 e-mail: recruiter@stpincausa.com

Database Administrator needed. Must have Bachelor's or equivalent in Engineering, Computer Science or Chemistry and 3 yrs. experience as DBA including Oracle 7.3, 8.0 and 8i with Windows platform and UNIX. Must also have one yr experience in testing and validating system in compliance with Fed. Regs. Work located in Wilmington, MA. Send resumes to: Richard Bianchette, 8483 Middle Fork Road, Boulder, CO 80302.

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Senior Recruiters: Should have min 3 Yrs Experience in IT Marketing Send Resume to: Dice Technologies, Inc. Attn: HR, 906 Lacey Ave, Suite# 206, LISLE, IL - 60532

Computer Programmers (multiple) - New Jersey Examine & analyze client IT needs. Plan, design, develop & integrate various IT solutions according to client specifications, existing hardware & budget. Perform above duties using ORACLE, JAVA, HTML, C, C++, JavaScript, JDeveloper 2.0, eGate, SeeBeyond, other EAI technologies. BS/MS & relevant experience req'd. Send resume to: HR, SysZen Technologies, Inc. 646 Highway 18, Suite 218, East Brunswick, NJ 08816

Telsoft Inc is a growing software development and consulting firm in Houston. We are looking for Computer Professionals for the following positions:

Software Engineer: Research, analyze, design and develop internet programs for WEB based knowledge management, customer relationship management, sales force automation and e-commerce for development of SAP packages. Must have knowledge of any SAP (S/1) Industry Solutions modules. Requires Masters degree or equivalent in Computer Science or in a related field and 1 one year of experience in the advertised position or in a similar position and ability to use SAP Industry Solutions modules. Must be willing to travel.

Programmer Analyst: Plan, test and develop internet based programs for ERP packages, CRM, Sales force automation and E-Commerce. Requires a Bachelors degree or equivalent in Computer Science or in a related field and one year of experience in the advertised position or in a similar position and ability to use ERP and CRM. Must be willing to travel.

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Send Resume and Cover letter to: Telsoft, Inc. 7457 Harwin Dr. # 303-B, Houston, TX 77036

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Programmer Analyst
Opening 4
Software design and development in C/C++, CORBA, OOP in UNIX Environment, UML, RUP, Rational Rose, Clear case, Clear quest, Oracle2000, web logic 6.X, Oracle9i, Dream Weaver, Vignette. Minimum Qualification: Bachelors in computer science or related fields is required with 2-3 yrs exp. Or Master's in computer science or related fields with 1-2 yrs exp.

Business Analyst
Opening 3
Performing diverse analytical tasks, support for continuous review and improvement of IT services delivery, web management, Business Development. Minimum Qualification: Bachelors in Business Management or related fields is required with 2-3 yrs exp.

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Programmer Analyst. Sought by Englewood Colorado consulting company to work in various unanticipated locations throughout the U.S. Convert project specifications and statements of problems and procedures into detailed logical flow charts for coding into computer language. Develop and write computer programs to store, locate and retrieve specific documents, data, and information. Program, test and implement web-based/client-server applications. Use of SQL, SQL Server, HTML, Visual Basic, Java, OOP, ASP and Windows NT. Regs. Bachelor or equivalent in Computer Science, Computer Engineering, Electrical Engineering, Electronics & Communication Engineer or related field. Plus 1 year in the job offered or 1 year in a related occupation, including Systems Engineer, Systems Analyst, Programmer, Software Engineer. \$56,000/year. 40hrs/wk, 8:30AM-5:30PM. Respond by resume to WORKFORCE DEVELOPMENT PROGRAMS, P.O. Box 46547, Denver, CO 80202, and refer to Job Order No. C05063926

ENGINEERING
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Job location: Watsonville, CA
Send resume w/rd to Powell Power, attn: HR, 5669 Gibraltar Dr. Pleasanton, CA 94588.

Applications Programmer Analyst Senior, Rockville, MD, WyStar Global Retirement Solutions. Define design, code, test, and implement quality based solutions. Regs. BA/BS in MIS, Computer Science or Mathematics and 2 yrs exp. in position offered or as a Programmer Analyst or Software Engineer. The 2 yrs need exp. must have incl. work with Daily 401(k) Record Keeping and Daily Trading app. systems Windows NT and Digital UNIX operating systems, Sybase, MS Access, C, C++, Java, JavaScript, HTML, Visual Basic, VB Script, SQL, SQL Server, PL/SQL, and Unix Shell scripting. 40hrs/wk. Send resume & c.v. to: John A. Craft, WyStar Global Retirement Solutions, 9210 Corporate Blvd., Suite 300, Rockville, MD 20850. No Phone Calls Please.

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Software Engineers to analyze, design business apps for SAP R/3 using ABAP, BAPI, WorkFlow, ALE, etc. under Windows and UNIX OS; analyze business processes to determine reqs and generate reports; prepare documentation, flow charts and programming specifications; create application prototypes for client approval and rapid application development; train users in business application usage. Require: MS or foreign equiv. in CS/Engg (any branch)/Math and 1 yr exp in IT. High salary. FIT position. Travel Required. Resume to: HR, Smartsoft International, Inc., 4898, South Old Peachtree Rd, Norcross, GA 30071.

Programmer Analysts to analyze, design web apps using Java, VB, JavaScript, VBScript, HTML, DHTML, ASP, PHP, Access, Oracle, SQL Server, Dreamweaver, Active X, IIS under Windows, UNIX OS; generate batch reports; conduct user req/feasibility studies & systems analysis; maintain, document, support, test and debug apps. Require: B.S. or prof exp that is functional equiv. in CS/Engg (any branch) with 2 yrs exp in s/w industry. High Salary. FIT. Travel Involved. Resume to: HR, Salem Associates, Inc., 405, 6th Ave., Ste 102, Des Moines, IA 50309

COMPUTER
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Graphic Designer: Handle graphic design projects on the web including concept development and information organizing using "visual design" skills with both print and interactive applications. Communicate efficiently with overseas subcontractors. Design and illustrate art and copy layouts for material to be presented in visual communications media, such as company brochure, magazines and newspapers. Req. BS or equivalent in Graphic Design or Fine Arts with 3 months exp. in job offered or as Web Designer. Must be proficient in Windows and OS platforms, Quark/Indesign, Illustrator, or Photoshop, AfterEffect, Twin-Bridge and HTML Coding. 40 hrs/wk, 9-5. Contact American Global Development Group at 900 Circle 75 Parkway, Suite 1680, Atlanta, GA 30339.

Logistics Engineers (Job #42) to design, develop and support logistical optimization algorithms and software solutions using VB, C, C++, Oracle, SQL Server, MSAccess, etc. under Windows & Linux OS; identify, create, implement solutions for cost reduction & process improvements of logistics services; interact with internal/external users to gather project data; req. design, develop optimization apps to support end-users; customize existing logistic solutions. Require: B.S. in Comp Engg, Industrial Engg./Logistics and 2 yrs exp in job offered. MS in any of the above will be accepted in lieu of BS and 2 yrs exp. FIT. Resumes to: Priscilla Vickers, Transplace, 509 Enterprise Drive, Lowell, AR 72745. Please specify job # on cover letter.

System S/Ware Tester needed at client sites to perform end-to-end system s/ware app testing incl s/ware release scheduling, manage, test, install/deploy, support production to end user groups, distribute work assignments, set up system test envmt & sanity check, & install & configure testing tools such as WinRunner, Test Director, Astra, Caliber RM. Add tools used incl Java, Sybase, Sun Solaris OS, Shell scripting to dlv web based testing tools, report & automate testing. Send resume to: Global Consultants, Attn: Hireme, 25 Airport Rd, Morristown, NJ 07960.

Programmer Analyst - various locations throughout U.S. - Responsibilities include analysis of software requirements, design, development, implementation & maintenance of software systems. Work to meet deadlines & software to clients. Position is 40 hrs/wk from 8:00 - 5:00 paying \$92,000/yr. Must have Bachelor's in elec eng or comp sci. Will accept foreign equiv or combo of academic & prof exp that is functional equiv of U.S. Bachelor's degree. Must have 2 yrs exp w/job offered or 2 yrs exp as comp professional. Must have exp w/analysis, design, development & testing of software applications. 2 yrs w/Oracle 8.0.1/8.1.7, PL/SQL.

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The screenshot shows the ITcareers.com homepage. At the top, it says 'IT careers' and 'An IT Career Network Solution Company'. Below this, there's a search bar with options for 'find a job', 'features & tips', 'post a job', and 'advertiser tools'. A sidebar on the left includes a 'SALARY SURVEY' section with a '100 BEST PLACES' graphic. The main content area displays a 'Welcome to IT Careers' message and a list of job opportunities. On the right, there's a section for 'Looking for a new IT career?' with a 'Explore our huge Jobs database' link.

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Systems Software Engineer
sought by MIG International Group, Inc. to work in Boulder, CO. Under close supervision, engage in moderately complex tasks involving the analysis of data communications systems (both hardware and software), to identify available e-commerce technologies. Requires a Bachelor's in computer science or related field, including mechanical engineering; one year experience in development of interfaces, procedures, scripts, and other utilities to implement an e-commerce database system utilizing web-based software development tools including Microsoft InterDev, JBuilder, Dream Weaver, and Front Page; software internationalization and localization specifically in Chinese (including Chinese fonts and character sets), and configuration management tools. Respond via resume to Jim Van Nelson, MIG International Group, Inc., 2460 Central Ave. P3-P4, Boulder, CO 80301 and refer to 4755CL.

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Provides programming leadership & support to the project team. Works on multiple protocols & drug compounds including pooling data for interim analyses, Integrated Safety Summaries, & Integrated Summary of Efficacy. Resp. include adhoc listings using SAS on UNIX & Windows environment. ext. Req M.S. Comp. Sci & 1 yr exp in job/1 yr exp as a Progr. Analyst. Send ad & resume: Kyle Foster, Amgen Inc., One Amgen Center Dr., Thousand Oaks, CA 91320-1799 (jobsite). Include Ad# 03-288FV.

Systems Administrator
for wholesale estb in Norwalk, CT. Req'd to encode, test & install systems for accounting, inventory, sales/invoicing & website prod analysis prgms; Monitor & update ntwrk/sys/prgms. Must have Bach Deg in Comp Sci or rel IT field (or equiv) & 2 yrs exp in job off'd or 2 yrs exp in mgmt/spec. position in Comp. Systems. Must have working knowl & ability to work in Unix, Cobol, C/C++, HTML, & Java. Send resumes to: General Mgr, Unique Beauty Supplies, Inc., 24 Belden Ave., Norwalk, CT 06850.

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Archstone-Smith Communities seeks applicants for the position of LRO Systems Administrator in Englewood, CO to configure, test and administer LRO (Lease, Rental Options) computer management system and servers. Requirements include bachelor's degree in computer science or engineering and 3 yrs exp administering LRO systems which run on Solaris operating system and incorporate Oracle RDBMS. Respond in writing with resume and reference JON 3778A to Cory Wood, Archstone-Smith Communities, 9200 Panorama Circle, #400, Englewood, CO 80112. No phone calls or emails.

Systems/Programs Analyst
sought by MIG International Group, Inc. to work in Boulder, CO. Under close supervision, engage in moderately complex tasks involving the analysis of data communications systems (both hardware and software), to identify available e-commerce technologies. Requires a Bachelor's in computer science or related field, including mechanical engineering; one year experience in development of interfaces, procedures, scripts, and other utilities to implement an e-commerce database system utilizing web-based software development tools including Microsoft InterDev, JBuilder, Dream Weaver, and Front Page; software internationalization and localization specifically in Chinese (including Chinese fonts and character sets), and configuration management tools. Respond via resume to Jim Van Nelson, MIG International Group, Inc., 2460 Central Ave. P3-P4, Boulder, CO 80301 and refer to 4755CL.

DBA for IT co in Treviso, PA. Design, admin & maintain Informix & Oracle databases on Unix platforms. Database upgrades, Migra, Backup, Recovery, & Perfmon Tune Informix & Oracle databases. Set up Enterprise Replication w/informix databases. Utilize programming Informix Esqic, Informix 4GL, VB, PERL, SHELL scripting. Req Bach deg or equiv in Comp Sci, Eng or equiv & 3 yrs exp in the job offered. Send resumes to: HR, Zen Art of Client Server Computing, Three Neshaminy Interplex, #301, US Rt 1 & Old Lincoln Hwy, Treviso, PA 19053, Fax: 215-245-4705, e-mail: resumes@zenart.com

PROGRAMMER ANALYST
Design, dvlp, analysis, testing and integration of complex web-based applications w/ MFG/PRO & Progress. B.A. Eng. or Computer Sci. or equiv + 2 yr in job or software dvlp. exp. reqd. WebSpeed, Java, MFG/PRO ERP w/in Progress Version 6, UNIX & LINUX exp reqd. Comp. salary. Apply to: BravePoint, 5875 Peachtree Industrial Blvd #200, Norcross, GA 30092.

Computer software engineer responsible for development/support of medical imaging applications and clinical software. B.Sc. in comp. eng. Or comp. science and 5 yrs. exp. reqd. Call Sunil Sharma @ Sunbelt Medical Corporation. 713/956-9500.

Senior Software Engineer needed. Must have Masters Degree in Computer Science or Engineering and 2 yrs experience as Software Engineer including 2 years of C/C++, Assembly and VxWorks. Send resumes to Roy Masters, Epilog Laser, 500 Corporate Circle, Ste. L, Golden, CO 80401.

Bioinformatics/Senior Software Engineer wanted to work closely with human genetics researchers, tech. database mgrs., programmers & bio. labs to assist in designing software solutions to cutting edge problems in the creation & interpretation of genomics databases; work as part of a team of Bioinformaticists, Database Admins., & Genetic Epidemiologists in developing & maintaining a large Laboratory Information Management System; design & support new apps. for an Oracle database encompassing genomic (incl. sequence data), clinical & epidemiological data; work closely with support staff to assist in disseminating data via web interfaces & to develop new bioinformatics software tools & methodologies; participate in the design, architecture, & engineering of next-generation Analysis Pipelines; & participate in the epidemiological, clinical & genetics research, such as data collection, biological information analysis & study mgmt. Must have Master's Deg. in Comp. Sci. & 2 yrs software develop. exper., incl. exper. developing Laboratory Information Management System, knowledge of scientific research process in bio. sciences, particularly the application of computer technology to optimize/support those processes, & proficiency in Oracle database design & development. Salary: \$90,462/yr. Send 2 resumes to: Case#200203383, Labor-Exchange Office, 191 Stanford St., 1st Fl., Boston, MA 02114.

DATAFORMIX Technologies, Inc. has openings nationwide for computer profiles w/ two yrs of exp in the following skills: VB, VB.NET, Delphi, Java, JavaScript, J2EE, J/VMP, J/NI, J/BI, EJB, SOAP, JBuilder, Visual Age for Java, PB, C++, VC++, COM/DCOM, SQL Server, HTML/DHTML, Active X, Site Server, Index Server, MTS, IIS, ASP, ASP.NET, InfoPath, JSP, Web Logic, WebSphere, Visual Source Safe, CORBA (Visabroker), CodeWright, Kawa, CGL, Perl, CSS, XML, XSL, DSDM, TCP/IP, CML, COBOL, II, VS-COBOL, IMS, DB2, CICS, JCL, VSAM, TSO/ISPF, DB2 Stored Procedures, MSQueries, File Aid, CMF, SCLM, Changeman, Sibas, Sintran, RogueWave, AUTO DESK, AUTO CAD, Oracle, PL/SQL, Oracle Forms, Oracle Reports, Oracle Express, Discoverer, Oracle App's, Manufacturing, Fin's & Supply Chain Mgmt, Oracle 11i CRM Applications, OLAP, Actuate Reporting, Bus Objects, SAP, ABAP/4, ISPF/Spool, AIX, Cognos Impropolis, SOAP, UML, Novell Netware, Win NT/2000/XP/2002, Unix & Shell Scripting/Programming, Linux, BSDI, ClearCase, Perforce, WebDB, Pervasive, BPWin. Positions req Bachs deg or Mast Deg. Equivalent deg & exp is accepted. Candidate should be willing to travel & relocate. Exc. Pay & Benefits. Sal commensurate w/ exp. and position sought. Email res: hr@dataformix.com

Programmer Systems Analyst
Coordinates, programs & designs techniques to develop & report solution using Cognos Suite of applications. Resp. for project status to higher mgmt. Req Bach. in Comp. Sci or Math or Computer-Related Discipline & 2 yrs exp in the job or 2 yrs exp as a Sr. Programmer/Systems Analyst. Send ad & resume: Kyle Foster, Amgen Inc., One Amgen Center Dr., Thousand Oaks, CA 91320-1799 (jobsite). Include Ad# 03-236FV.

Senior Computer Systems Analyst - RELIANCE STANDARD LIFE INSURANCE COMPANY (RSL), a leading national employee benefits insurer and subsidiary of the Delphi Financial Group, Inc. (a highly successful NYSE-listed integrated employee benefits services company with \$3.5 billion in assets), has an outstanding opportunity in its Information Services group for a Senior Computer Systems Analyst. This position will analyze, develop, and test programs to support all-encompassing insurance applications using object-oriented design. Develop group claims and policy administration system using Progress 9.1c 4GL, Smart Objects and ADM2. Analyze business/user requirements and implement system changes. Implement and install new software releases. Monitor back-end Oracle database and support applications to optimize system performance. Develop MIS reports using 'Actuate' Reports Toolset. Brief travel to Canada required several times a year. Position requirements include Bachelor's in Information Science or PHD at least five (5) years of application development experience, with at least two (2) years utilizing FrontTier programming framework. Applicant must be knowledgeable in Progress 4GL, Knowledge ADM2 and Smart Objects (version 9.1c or higher), including object-oriented programming concepts utilizing Progress/Oracle Database administration skills. Knowledge of XML and Actuate is a plus. Insurance industry or relevant consulting experience highly preferred. RSL offers a highly competitive compensation and benefits package (including business casual dress, 100% tuition reimbursement for approved courses, and immediate eligibility for 401(k) savings plan participation). Please mail resume and salary requirements to: Belinda Jordan, PHR, H.R. Generalist, RELIANCE STANDARD LIFE INSURANCE CO., 2001 Market Street, Suite 1500, Philadelphia, PA 19103. FAX: (267) 298-3543. belinda.jordan@rsl.com All applicants will receive consideration for employment without regard to race, color, religious creed, disability, national origin, veteran's status, gender, or sexual orientation.

Software Engineer. Sought by Englewood Colorado consulting company to work in various unanticipated locations throughout the U.S. Duties: Research, design and develop computer software systems in conjunction with hardware product development. Analyze software requirements to determine feasibility of design within time and cost restraints. Consult with clients to define needs or problems. Use of C++, Java, JavaScript, HTML, XML, Oracle, SQL Server, Tcl/Tk, UNIX, COM, VAX 3400, SUN Sparc and eMatrix. Reqs. Masters or equivalent in Computer Science, Computer Engineering, Electrical Engineering or related field. Plus 3 years in the job offered or 3 years in a related occupation, including Programmer Analyst, Consulting Analyst or Implementation Consultant. Will accept a Bachelors degree plus five years of progressive experience in the field or related occupation in lieu of required education and experience. \$75,000/year, 40 hrs/wk, 9AM-6PM. Respond by resume to WORKFORCE DEVELOPMENT PROGRAMS, PO Box 48547, Denver, CO 80202, and refer to Job Order No. CO5050967

Principal Software Engineer
-Westford, MA

Map marketing requirements to detailed technical feature sets and work to resolve requirements gap. Prepare and review functional and design specifications for large embedded telecommunications software to be used in new or existing data switch features based on ATM, Frame Relay, ISDN, SST, and IP protocols. Develop interfaces to routing protocols and ensure support for Internet technology. Implement features as part of software release. Identify, locate, and troubleshoot software defects in large embedded software. Work with call-set up and signaling protocols related to ATM, Frame Relay, and SST. Serve as technical lead and oversee activities of junior engineers, including document and code review and defect resolution guidance.

Requires a Bachelor's degree in Comp. Sci., Comp. or Elec. Eng., or related field, and 5 years of exp. in job offered or 5 years of exp. as SW Eng. Manager, Telecom Eng., or related occupation. The 5 years of exp. must be post-baccalaureate, progressive experience involving design, development, and troubleshooting call control software for large embedded telecommunications systems using ATM, Frame Relay, or SST and tools. 40 hrs/wk, \$100,000/yr. Please send two (2) resumes to:

Case# 200203413
Labor Exchange Office
19 Stanford Street, 1st floor
Boston, MA 02114

Senior Consultant. Define business requirements, lead testing and train initiatives for business users. Implement and customize CLARIFY customer relationship management software using software development methodology and software packages, including CLARIFY, ACTUATE, Oracle 8.0.5, Java, PL/SQL, CLEAR Basic, Crystal Reports, and Unix shell scripts. Define clients' needs and problems by testing applications for defects. Conduct studies to obtain data for analysis and recommendation of solutions. Define and author functional requirements, write design documentation, construct application code and implement customer relationship management software. In connection with the above systems engineering duties, utilize client/server and object oriented technologies. Requirements: Bachelor's degree in Computer Science or Engineering plus 2 years experience in job offered or 2 years experience as Systems Engineer using CLARIFY, Oracle, PL/SQL, UNIX, ACTUATE & Crystal Reports. Work location: Denver, Colorado. 40 hours per week; \$66,000.00 per year. Application is by resume only. Please reference job order COS064383 and send resume to: Workforce Development Programs, P.O. Box 46547, Denver, CO 80202. Ad. paid by an Equal Opportunity Employer.

PROGRAMMER/ANALYST to analyze, design, develop and implement application software using Oracle, Forms, Reports, Unix Shell Scripting, Visual Basic, C, MS Access, MO Series, Oracle Developer 2000, SQL Server, SQL PL/SQL, Pro C++, HTML, SQL Loader, SQL*Net, SQL*Reports, SQL Navigator, TOAD and DB Visualizer under Windows and UNIX operating systems. Require: B.S. degree in Computer Science, an Engineering discipline, or a closely related field with 2 yrs of exp. in the job offered. Extensive travel on assignments to various client sites within the U.S. is required. Competitive salary offered. Apply by resume to: Sophie Mookeri, Software Paradigms International, Inc. 3301 Roswell Road, Suite 134, Marietta, GA 30062. Attn: Job SA.

Software Engineer. Design, development & implementation of software applications for business processes using object-oriented methodologies. Client consultation, analysis of project requests, requirements & feasibility, & recommendation for program/project enhancements using the Rational Unified Process. Workflow documentation. Technical Environment: J2EE, IBM Websphere, UML, WASD, XML, JSP, JDBC, EJB, Servlets; Beans; Swing; Visual Age for Java; Rational Rose. Bachelor's degree in Comp. Sci. or Eng. + 2 yrs exp. in job offered or as Software Consultant or Programmer Analyst req'd. (*Associates degree in comp. eng. tech. + 2 yrs exp. in software development also acceptable). Previous experience must include: J2EE; Websphere, UML. 40 hrs/wk, \$72,000/yr. Must have proof of legal authority to work in the U.S. Send resume to Iowa Workforce Center, 215 Watson Powell Jr. Way, #100, Des Moines, IA 50309-1727. Refer to JO# IA1101819. Employer pd ad.

A position is available for a Application Analyst with an Atlanta-based computer software developer and supplier. The Application Analyst will be primarily responsible for providing technical, e-mail, and web-based technical assistance to domestic and international computer system users; troubleshooting and resolving computer problems for end users; and conducting testing and research in product functionality and quality in domestic and international operating environments. Candidates for this position should possess a Bachelor's degree in a computer field and at least two years' experience in troubleshooting customer issues including issues related to international operating environments; set-up of international operating environments for use in support and quality assurance testing; restoration of computer system data and diagnosis of causes. Apply with resume by mail to: Keith L. Soles, Mapics Inc., 1000 Windward Concourse Parkway, Suite 100, Alpharetta, Georgia 30005.

Computer Professionals (Multiple Openings) Software Engineer/ Sys. Analyst/ Programmer Analyst/DBA

Must have bachelor degree or equivalent and experience in some of the following: Java, Cobol, JCL, C/C++, VB, ASP, Databases (Sybase / SQL / Oracle / MS Access / DB2), ERP/CRM (PeopleSoft, SAP, JD Edwards, BAAN, Siebel, Vanice, Oracle), Datawarehouse Tools (Cognos/informatica/BO), Tools (CM/Synergy, Vtiia) in Windows and/or UNIX and/or Linux operating systems. Must be able to travel or relocate nationwide. Send Resume to: HR Manager, Adequacy, Inc., 10817, Waterbury Ridge Ln., Kentville, OH 45458 or resumes@adaquacy.com. Only email/mailed resumes accepted (No Walk Ins).

Advanced Photographic Solutions. Cleveland, TN, seeks a Software Engineer with experience in SQL Server, Active Server Pages (ASP.net), Kodak Professional Digital Print Software (KDP2), & Visual FoxPro. Requires a Master's degree & 3 yrs. of related exp. in lieu of a U.S. Master's, employer will accept evaluated foreign equivalent. If interested, please send resumes to Mike Christian, HR Director, Advanced Photographic Solutions, 1525 Hardeman Lane, Cleveland, TN 37320 or fax to (423) 339-0283. EOE.

SENIOR SOFTWARE ENGINEER to design, develop and test embedded state machine closed loop control system. Bootloaders, Chip Level Drivers and RTOS software for microcontroller/DSP based DC & AC Motor Controllers using C, C++ and Assembly. Implement and design software for SPI, I2C, RS232 and CAN based applications; Implement serial and parallel data transfer technologies and perform integrity checks; Perform functional analysis to correct operation of software in accordance with product specifications and design criteria; Mentor junior engineers and programmers. Require: M.S. degree in Computer Science, an Engineering discipline, or a closely related field with 2 yrs of exp. in the job offered. Extensive travel on assignment to various client sites within the U.S. is required. Competitive salary offered. Send resume to: Krishna Muppavarapu, Delta Maunty Associates, Inc., 102 Furlong Court, Frankfort, KY 40601 Attn: Job RP.

TECHNICAL DESIGNER

CSC Consulting Inc. seeks Technical Designer to work in El Segundo, CA. Must have 5+ years throughout the U.S. and intermediate ability. Utilize knowledge of software development tools such as MS VISUAL BASIC, Net, MS SQL SERVER, ORACLE, JSP, J2EE, and Development tools). DTS Packages / SQL stored procedures, JAVA, Active X, ADO, ODBC, Visual Source Safe, Vao, Polyreference. Video on work, PCL2PDF tools Windows NT and end users 2000/Server to work job duties. Design, develop, re-engineer and integrate technology as a means toward a business solution. Requires Bachelor's or equivalent and relevant experience. Please submit a cover letter and resume to CSC HR, 1111 Bayview Drive, Suite 250, San Bruno, CA 94066. Reference job code MS00069 in cover letter.

HTTP://CAREERS.CSC.COM



TECHNICAL SUPPORT SPECIALIST to provide technical support to faculty and students in the use of computer and network facilities. Plan, install and maintain computer networks, software and equipment in the Computer Science Department, and make recommendations for improvements: Install and configure Sendmail, NFS, Apache, NFS, DNS, DHCP and WINS servers on Windows and Redhat Linux, and ensure compatibility with existing system; Configure and maintain protocols, topologies, switches, routers, access server, firewalls and other network related technology, including Cisco routers, Cisco switches, Cisco PIX firewall and Symantec enterprise firewall; Troubleshoot and repair computer hardware components of PCs and workstations. Require: B.S. degree in Computer Science/Engineering, or a closely related field with 2 yrs of exp. in the job offered or as a Network Administrator. Competitive salary offered. Apply by resume to: HR Dept., Mercer University, 1400 Coleman Avenue, Macon, GA 31207. Attn: Job RN.

Database Administrator Louisville, KY: Implement, tune, maintain, recover and backup Oracle ROBSMS, SQL Server and PL/SQL databases. Develop physical and logical data models, stored procedures, Boume, Korn and Shell scripts and Crystal Reports. Requires a Bachelor's Degree in Computer Science or equivalent, plus at least two years work experience as a Programmer Analyst using Oracle, PL/SQL and Shell Scripting. Reply with resume to: Recruiter, P.O. Box 6351, Louisville, KY 40206-0351.

Programmer Analyst - various locations throughout U.S. - Responsibilities include analysis of software requirements, design, development, implementation & maintenance of software systems. Work to meet deadlines & software to clients. Position is 40 hrs/wk from 8:00 - 5:00 paying \$92,000/yr. Must have Bachelor's in elec eng or comp sci. Will accept foreign equiv or combo of academic & prof exp that is functional equiv of U.S. Bachelor's degree. Must have 2 yrs exp w/job offered or 2 yrs exp as comp professional. Must have exp w/analysis, design, development & testing of software applications. 2 yrs w/Oracle 8.0/8.1.7, PL/SQL, HTML, Unix & NT Scripting languages, Java Servlets, JSP, OOA & OOD. Referencing #WEB 380116, submit resume to Manager, Butler County CareerLink, Pullman Commerce Center, 112 Hollywood Drive, Suite 101, Butler, PA 16001-5699.

Senior Database Administrator for a growing Biotech company: BS/Computer Science or MIS, with extensive experience in database administration, using Sybase, MS SQL Server, T-SQL, DBArtsian and Erwin; including 1 year experience in genetic information database management. Send resumes to: Open Biosystems, Inc., 6705 Odyssey Dr., Huntsville, AL 35896.

SENIOR SOFTWARE ENGINEER to design, develop, implement, test, maintain and support n-tier web-based applications and client/server applications using C, C++, VC++, Java, HTML, ASP, Visual Basic, Oracle, SQL Server, MS Access and FTP on UNIX, SUN Solaris and Windows platforms. Require: B.S. degree in Computer Science, an Engineering discipline, or a closely related field with 5 yrs of progressively responsible exp. in the job offered or as a Systems Analyst. Extensive travel on assignment to various client sites within the U.S. is required. Competitive salary offered. Apply by resume to: Ravi Kandamala, Everest Computers Inc., 875 Old Roswell Road, Suite E-600, Roswell, GA 30076; Attn: Job MD.

Support Engineer (Boston). Requirements: Bachelors degree + 2yrs exp in OS support, productivity apps, TCP/IP, networking & printing. Duties: Administer WINNT svcs & workstations (LAN/WAN) using SMS management tools. Develop & maintain automation scripts in Batch & Visual Basic: MS Access databases for client support; Intranet-based knowledge bases in HTML & Java. Assist w. developing, deploying, user training & troubleshooting. Report on network status & user satisfaction. Relocation within USA possible. Attractive comp pkg. Resumes to Susan Labandibar, Computer Warehouse Associates, 574 Dorchester Ave., S. Boston, MA 02127.

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The top 5 most hyped technologies

1 CRM 2 Wireless
3 VoIP 4 3G 5 .Net

TOP 10: What They're Reading

■ **From Good to Great: Why Some Companies Make the Leap... and Others Don't**, by Jim Collins

■ **Who Says Elephants Can't Dance? Inside IBM's Historic Turnaround**, by Louis V. Gerstner Jr.

■ **Execution: The Discipline of Getting Things Done**, by Larry Bossidy, et al.

■ **Seabiscuit: An American Legend**, by Laura Hillenbrand

■ **A Prayer for Owen Meany**, by John Irving

■ **A Short History of Nearly Everything**, by Bill Bryson

■ **Harry Potter and the Order of the Phoenix**, by J.K. Rowling

■ **Jack: Straight from the Gut**, by Jack Welch and John A. Byrne

■ **The Prayer of Jabez: Breaking Through to the Blessed Life**, by Bruce Wilkinson

■ **The King of Torts**, by John Grisham

The top 10 most promising technologies for their industries

- 1 Wireless/mobile
- 2 Web services
- 3 Business analytics
- 4 Utility computing
- 5 Enterprise integration
- 6 Linux
- 7 Collaboration technologies
- 8 Security
- 9 Vertical-industry-specific apps
- 10 Storage management

FRANK HAYES ■ FRANKLY SPEAKING

STAYING Sane

CORPORATE IT IS A RISKY BUSINESS. That's not new, but it's truer now than ever before. Nothing is guaranteed. Uncertainty is inevitable. Technology, business conditions and strategic requirements change constantly. You can never know in advance whether you really understand what users and the business need or whether technology can deliver it. And, oh yes, there really are people gunning for you.

That's a high-risk environment by anyone's definition. And with the risks — and the stakes — so high, it's important to remember what your top priority has to be: staying sane.

What, you thought your top priority should be managing those risks, or minimizing them, or even making them go away? Those are important goals. But they have to be secondary. This isn't the risk-avoidance department. It's the IT department. This is where technology is put to use making the business more efficient and effective, remember?

If you forgot that for a moment, don't feel bad. Risk distorts our perceptions of reality. So do unavoidable uncertainty and adversarial politics. Threats and problems loom larger than they really should. Mundane matters like doing business and keeping the machines humming shrink from view.

But if you can't see clearly, you won't make sensible decisions. What you do won't be sane. And the results you get will show it.

And the bigger the budgets get, the more bet-the-business the projects are, the more likely it is that you'll slip into that trap — and the more costly your mistakes will be.

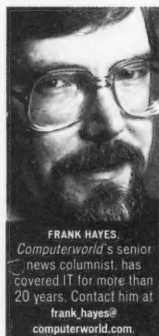
You can't afford that kind of misstep these days. In the face of risk, you have to stay connected to the realities of IT and your business.

You have to stay sane.

How do you do that? You make plans. And measure performance. And maintain perspective.

Why make plans? Because plans keep you tied to reality. They force you to balance costs and benefits, risks and payoff. They drag the dangers out in the open and stand them right next to the rewards you'll get for successfully executing the plans.

Sure, you should take risks into account in every plan you make. And as risks change, you should revisit your plans to make sure the risk/reward calcula-



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tions you made are still in balance. But a good planning process helps to keep you from reacting just to risk — and sliding out of reality.

Why measure performance? Because that's how you test your plans against reality. You have metrics. Now's the time to make sure they measure things you really need to know. You want projects whose success will silence your critics. You want operations that keep the business humming — and keep risks to the business low. Measure to match those goals.

Don't make a few metrics the goal of your department, or you'll discover that misused metrics can distort your perceptions even more than risks can. But used properly, metrics, like plans, can keep

you tied to reality.

Why maintain perspective? That is, why put extra effort into maintaining it? Because that's the first thing you'll lose as risks heat up. If you're constantly putting out fires — or guarding against potential fires — you can't see the context. That means you can't take care of business.

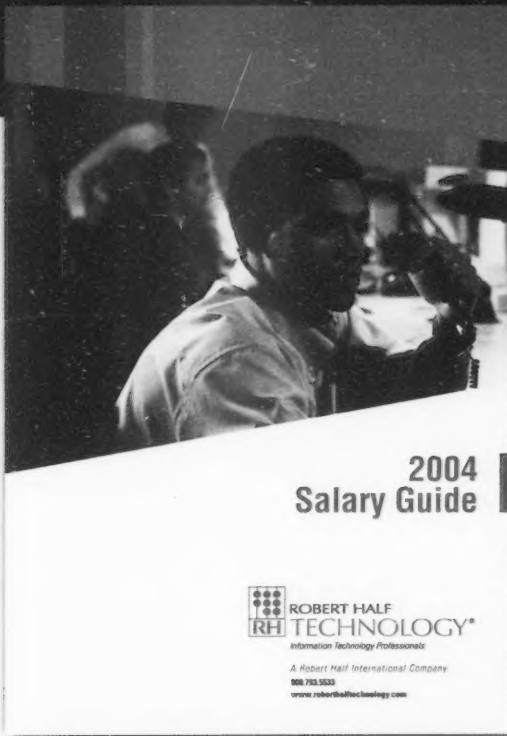
And your best tool for keeping the big picture in sharp focus is still the collection of people around you — your bosses, your peers, your users, your IT people. You know which ones you can trust. Test your perceptions of risk with them. They'll help you spot which ones are overblown and which ones you're underestimating. They'll help you stay sane.

Yes, IT is risky. And those risks matter, because every serious IT risk is also a risk for your business. But if you let the risks capture too much of your attention, you won't be managing those risks. The risks will start to manage you.

And that's the riskiest business of all. ☐ 43206

How have workloads in the
IT industry changed in
the past 12 months?

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